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Women's voices:
towards understanding the organization and women's views of
maternity care in the Netherlands

Carien Baas

The studies presented in this thesis were conducted within Amsterdam UMC, VU University Medical Center, the Department of Midwifery Science, Public Health Research Institute, Amsterdam, the Netherlands and Department of General Practice & Elderly Medicine, University Medical Centre Groningen, University of Groningen, the Netherlands and AVAG Midwifery Academy Amsterdam Groningen, the Netherlands in collaboration with NIVEL (Netherlands Institute for health services research), Utrecht

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Women's voices: towards understanding the organization and women's views of maternity care in the Netherlands

ACADEMISCH PROEFSCHRIFT

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aan de Vrije Universiteit Amsterdam,
op gezag van de rector magnificus
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in het openbaar te verdedigen
ten overstaan van de promotiecommissie
van de Faculteit der Geneeskunde
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door

Carien Irene van de Werf-Baas

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prof.dr. R.G. de Vries
dr. J. van Dillen
dr. A. de Jonge
dr. P. Offerhaus

Paranimfen: Diana Bonjer-van der Maar
Laura A. Vos

“ Health (maternity) care should be based on a deep respect for patients (women) as unique living beings, and the obligation to care for them on their terms. Thus patients (women) are known as persons in context of their own social worlds , listened to, informed, respected, and involved in their care and their wishes are honored (but not mindlessly enacted) during their health (maternity) care journey.”

The originators of client-centered and patient-centered health care

Voor mijn ouders
Martine en Jan

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CHAPTER 1

General introduction



Women's voices: towards understanding the organization and women's views of maternity care in the Netherlands

This thesis contributes to our knowledge of the organization and women's views of maternity care in the Netherlands. The thesis explores women's suggestions for improving and preserving (primary) midwifery care in the Netherlands and identifies factors associated with less positive experiences of maternity care during childbirth and the postnatal period. Data was collected between 2009 and 2011.

Women's experiences of pregnancy and childbirth and of the care during those events, is important in all cultural contexts.¹ Both positive and negative experiences of pregnancy and childbirth can have immediate and long-lasting effects on a woman's well-being and her relationship with her child.² A less positive experience with pregnancy and childbirth may significantly influence women's emotional well-being, and may even contribute to the development of posttraumatic stress or depressive mood disorders.²⁻³

There are many factors which have been shown to influence a woman's experience with pregnancy and childbirth including: age, parity, social status, expectations, prenatal education, being informed, experience of control, pain, mode of birth, medical interventions, experienced support from caregivers and/or partner, duration of labour and the birth environment.⁴⁻¹⁰

Satisfaction with the childbirth experience is distinct from satisfaction with the care that was received during childbirth.¹¹⁻¹² Care provided by maternity care providers during childbirth makes an important contribution to a woman's perception of her childbirth.^{1, 5, 7-9, 11} Although, a woman can be satisfied with her own accomplishment and look back positively on childbirth, but at the same time be dissatisfied with the care she experienced.

The involvement of patients and clients as active participants in health care instead of passive care recipients has increased over the past few decades, and is visible in the growing amount of literature about informed and shared decision making and patient engagement.¹³⁻¹⁷ Involving clients in their care appears to consistently result in increased satisfaction with care as well as significantly improving health outcomes.^{18,19} Women's views of their care experience are likely to provide an important resource to healthcare professionals and health policy makers involved in development and improvement of maternity care services.^{4,6} Chapter 5 and 6 presents women's suggestions for maintaining and improving quality of midwifery care in the Netherlands.

Research into the experiences with care can be challenging.^{4, 6, 20} There is generally a lack of variation in results and it is skewed towards the high end of the scale: typically at least 80 percent of respondents express satisfaction for any given question relating to the care they received. Clients are often reluctant to criticize caregivers.²¹ This reluctance has been explained by patients' gratitude, loyalty, and confidence (and possibly a lack of comparison) in the health care system. Nevertheless, when either more specific questions or more open-ended questions are asked, dissatisfaction with care can be elicited.^{6, 21} Most research about birth satisfaction focuses on women with high levels of satisfaction; few studies are powered to consider those

women with lower levels of satisfaction.⁸⁻¹⁰ Focusing purely on satisfaction with the experienced care may miss the separate but illuminating construct of patient dissatisfaction²², which may highlight problems and inform areas for improvement in the maternity care system.^{6, 22-23} Chapter 3 focuses on input from women who experience less than good care.

The maternity care system in the Netherlands is acknowledged as different from that of other high income countries, not only because of a higher percentage of home births (13%),²⁴ but also because of the autonomy of the midwife as a medical professional, the role of the maternity care assistant, and the structure of the Dutch health care system with a clear boundary between primary and secondary care.²⁵

In primary care, community midwives provide care to low-risk women as long as their pregnancies and births remain uncomplicated. In secondary care (in hospital), obstetricians and clinical midwives provide care to high-risk women or women with complicated pregnancies or births. If complications occur during childbirth, or if pain relief is requested, a woman who is in primary care is referred to secondary care in the hospital and will then be attended by an obstetrician and clinical midwife. A healthy woman with an uncomplicated pregnancy has no need to see another care provider apart from her midwife. Maternity care assistants (MCAs) in the Netherlands assist the midwife during childbirth and help and advise the new mother with the baby at home, for 1-10 days depending on the duration of any hospital stay after birth.^{25,27-28} In the Netherlands 87% of the women start their antenatal care in primary care and 36% are referred to secondary/tertiary care during pregnancy. The remaining 51% begin care in labour with a community (primary care) midwife.²⁴⁻²⁵

Organization of maternity care for women at 'low risk' for complications; Content of maternity care

Antenatal care in the Netherlands for healthy women consists of an average of 13 visits to a midwife. National midwifery guidelines on antenatal care (the Royal college of midwives, KNOV), recommend scheduling the first consultation between the 6th and 8th week of the pregnancy. On average women receive one up to three ultrasound scans during pregnancy.²⁵

Healthy women can choose to give birth at home, in a hospital or in a birth centre. They receive professional support during childbirth from their midwife and MCA at home or midwife and MCA or nurse in the hospital or birth centre. In the Netherlands 13% of the women give birth at home and 87% in hospital or a birth centre following which they will usually return home within a few hours.²⁴⁻²⁵ To better understand how women perceive their care during childbirth in chapter 1 we focus on women who report 'less than good' care from their midwife during childbirth, and study if they differ from women who report 'good to best possible' care from their midwife during childbirth in terms of experience and/or background?

Research has highlighted the benefits of continuous support during childbirth.^{29,30} Several potential providers of continuous support have been identified in the literature, such as a companion of the women's choice, female relatives or friends, nurses, midwifery students, vol-

unteers from the community, midwives, and doulas. Almost all studies indicated favourable outcomes of continuous support, such as fewer caesarean sections and instrumental births, lower rates of oxytocin stimulation, shorter labours, shorter hospital stays, less medication use, reduced use of epidural analgesia, higher incidence of normal birth, more intact perineums, and a lower risk of a baby with a low 5-minute Apgar score. Furthermore, continuous support has been associated with higher rates of breastfeeding, better coping with labour, lower pain and anxiety scores and higher rates of satisfaction.³⁰⁻³¹

However, the literature is not entirely unambiguous. Some studies show no effect of continuous support.³²⁻³³ As an explanation Hodnett (2007) has suggested that continuous labour support appears to reduce operative birth and increase spontaneous birth when it is provided by caregivers who are not employees of an institution (and thus have no obligation to anyone other than the labouring woman) and who have an exclusive focus on emotional continuous support and have no additional medical responsibilities.³⁴ Maternity care assistants (MCAs) may fit this criterion, as they are not employees of either the midwifery practice or the hospital, but employees of the maternity care assistance organization.²⁸

In the Netherlands the midwife and MCA (at home or in hospital) or nurse (in hospital) are not necessarily continuously present during the process of labour. The midwife may be on call for multiple clients and therefore might not have sufficient time to stay with the labouring mother during the entire process. However, this is also dependent on the size of the midwifery practice, their caseload and their work strategy. Generally, the midwife will come and go during the first phase of labour and will stay when it can be assumed that the child will be born in the following couple of hours.²⁵ Nevertheless, there are practices with smaller caseloads in which the midwives already provide continuous support themselves. The MCA's task during childbirth is to assist the midwife; he or she usually arrives at the second stage of labor.²⁸ Chapter 2 focuses on the women's opinion about support during childbirth and chapter 3 will be focused on the opinion of MCAs about extending their role to provide continuous support during labour and possibly more additional medical tasks.

The care provided in the postpartum period differs across jurisdictions and maternity care models, in terms of duration of postpartum hospital stay, frequency and number of home visits as well as care provider qualification.³⁵⁻³⁶ The aim of postpartum care in the Netherlands is 'to detect health problems of mother and/or baby at an early stage, to encourage breastfeeding and to give families a good start'.²⁷⁻²⁸

The Netherlands' maternity care system aims to enable every new family to receive postpartum care in their home.³⁷ At home almost all new families receive care from a team consisting of a midwife and a MCA. A primary care midwife will visit the family 3-5 times (or more when necessary) in the first 8 to 10 days after birth. The MCA provides care (3-8 hours per day) up to 8 to 10 days after birth. Maternity care assistance is part of the standard insurance package, requiring a small co-payment by families. The following tasks are assigned to MCAs: nursing care for the baby, nursing care for the mother, infant feeding support, health education

about the baby and about the mother, support with household tasks, receiving visitors and taking care of other children.²⁷ Chapter 4 presents (1) the uptake of MCA care among postpartum women in the Netherlands and (2) factors associated with women's ratings of care provided by the MCA.

The organization of the maternity care system has been the focus of evaluation and change in several countries and jurisdictions, sometimes with major initiatives to reorganize the maternity care system.³⁷⁻³⁹ The recent years, in the Netherlands, there has been a lot of discussion among professionals and in the general media following reports indicating that reductions in perinatal mortality were lagging compared to other European states. A commonly aired suggestion was that perhaps the unique Dutch maternity care system with independent primary care midwives might have been a contributing factor – a suggestion that has, however, not been substantiated.⁴⁰ A major focus of attention in discussions among the professional groups, and in national media outlets, has been on the need for a more integrated healthcare system with fewer barriers between echelons of care.^{24,26} In 2009, the Dutch Minister of Health instructed a committee ('Steering Group Pregnancy and Childbirth') to draw up recommendations that could improve the organization of maternity care and reduce perinatal mortality. The report recommended putting the pregnant woman 'in the centre of care' and that maternity care providers focus more specifically on the expectations, wishes and anxieties of pregnant women, while taking into account each woman's medical and social risk factors. Another recommendation was to provide women with continuous support, from the start of active labor.³⁷

However, while focussing on what should be improved/changed in the organisation maternity care, it may be at least as important to contemplate what should be maintained and preserved. An important goal of this thesis is to bring the voice of women to the discussion and to discover what aspects of maternity care clients regard as valuable that should be preserved.

Study design

DELIVER study

This thesis contains the reports of studies which are built on the DELIVER study (DELIVER stands for Data Eerste Lijns VERloskunde, data on primary midwifery care), which is a large prospective cohort study in the Netherlands set up to investigate the organization, accessibility and quality of primary midwifery care. Data were collected from clients and their partners, midwives and other healthcare professionals across the Netherlands, between September 2009 and April 2011. Clients from twenty midwifery practices assessed their expectations and experiences. These client data were linked to data from electronic client records kept by midwives and collected by the Netherlands Perinatal Register. Methodological details of this study have been published previously.⁴¹ The Medical Ethics Committee of VU University Medical Centre, Amsterdam approved the study protocol of the DELIVER study.

Recruitment DELIVER study

Clients were recruited from 20 midwifery practices. Purposive sampling was used to select practices, using three stratification criteria: region, level of urbanization and practice type (dual or group practice). The 20 participating practices included 108 midwives and about 8200 clients per year. The primary aim of the client questionnaires was to develop a profile of a pregnant woman in the Netherlands, her background, her health, her lifestyle, her work, her use of healthcare in general and in addition to that to assess her expectations and experiences with and her rating of the maternity care. Clients were eligible to participate if they were able to understand Dutch, English, Turkish or Arabic. Midwives provided the usual care to all their clients irrespective of their participation, but they were required to inform all eligible clients individually about the study and invite them to participate. To improve the overall response, a reminder was sent to all non-responders.⁴¹

Outline of this thesis

The outline of this thesis is partly chronological starting with maternity care during childbirth (chapter 2, 3 and 4), followed by maternity care postpartum (chapter 4 and 5) to maternity care in general (chapter 6 and 7).

Chapter 2 This thesis focuses on the organization and women's views of maternity care in the Netherlands. To better understand women who experienced their care during childbirth as less than good care the research question of chapter 2 is:

Do women who report 'less than good' care from their midwife during childbirth differ from women who report 'good to best possible' care from their midwife during childbirth in terms of experience and/or background?

Chapter 3 The organization of maternity care is under scrutiny and the report 'a good start' recommended to provide continuous support to women in active labour. In the report the MCA is suggested as a potential provider to provide this support. To address this issue, in chapter 3 we focus on the MCA's opinion about providing continuous support during childbirth, with the research question:.

What is the opinion of MCAs about providing continuous support during labour and performing additional medical tasks? It was hypothesized that MCAs would be positive about these new possibilities.

Chapter 4 In this chapter, the focus is on women's views about support during and after childbirth. The research question this study addresses in chapter 4, is twofold:

What are the preferences and preparations for support during and after childbirth of pregnant women in primary midwifery care in the Netherlands, and do women indicate a specific desire for continuous support during labour (from 4 cm dilation onwards). We also aim to

investigate whether women's preferences and their preparations for this support during and after childbirth are associated with parity and the intended place of birth.

Chapter 5 One of the unique aspects of the organisation of maternity care in the Netherlands is the postpartum maternity care assistance by the MCA. To give an overview of the current situation and address a less than good experience with postpartum care by the MCA chapter 5 focuses the following research questions:

(1) What is the uptake of MCA care among postpartum women in the Netherlands and (2) what factors are significantly associated with women's ratings of care provided by the MCA? To address the latter, we compared women who rated care they received by the MCA as 'good' and 'less than good care'.

Chapter 6 To study women's perspective on the care provided by midwives and to partly explore their experience we address the following research question in chapter 6:

What are women's suggestions for improving (primary) midwifery care in the Netherlands?

Chapter 7 To explore women's perception about what should be preserved in the maternity care in the Netherlands, chapter 7 presents the following research question:

What are women's suggestions about what midwives should preserve/maintain in the maternity care system in the Netherlands?

Chapter 8 To summarize and discuss the findings of this thesis, and put them in a broader perspective the final chapter of this thesis presents the general discussion. Chapter 8 also includes recommendations for practice and for future research.

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CHAPTER 2

Client-related factors associated with a “less than good” experience of midwifery care during childbirth in the Netherlands

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ABSTRACT

Background: A “less than good” experience during childbirth can affect a mother’s early interaction with her child and may significantly influence a woman’s emotional well-being. In this study, we focus on clients who experienced midwifery care provided during childbirth as “less than good” care. The aim of this study was to understand the relationship between client-related factors and the experience of midwifery care during childbirth to improve this care.

Methods: This study was part of the “DELIVER study” where mothers report on the care they received. We used generalized estimation equations to control for correlations within midwife practices. Forward multivariate logistic regression analyses were conducted to model the client-related factors associated with the experienced midwifery care during childbirth.

Results: We included the responses of 2,377 women. In the multivariable logistic regression model, odds of reporting “less than good care” were significantly higher for women who experienced an unplanned caesarean birth (OR 2.21 [CI 1.19–4.09]), an instrumental birth (OR 1.55 [CI 1.08–2.23]), and less control during the dilation phase (OR 0.98 [CI 0.97–0.99]) and pushing phase (OR 0.98 [CI 0.97–0.99]).

Discussion: Birth-related factors were more likely than maternal characteristics to be associated with the experience of midwifery care during childbirth. We conclude that there is room for midwives to improve their care for women during childbirth particularly in improving the patient centeredness of the care provider, using strategies to enhance sense of control, and focusing on the particular needs of those who experience instrumental vaginal or unplanned caesarean births. (BIRTH 44:1 March 2017)

Key words: childbirth experience, dissatisfaction, midwifery care

INTRODUCTION

A “less than good” experience with childbirth can affect a mother’s early interaction with her child and may significantly influence women’s emotional wellbeing in the short and longer term, even contributing to post-traumatic stress or depressive mood disorders.¹⁻² Many factors influence women’s experience of childbirth including: age, parity, social status, expectations, prenatal education, being informed, experience of control, pain, mode of birth, medical interventions, experienced support of caregivers and partner and duration of labour, and the birth environment.³⁻⁵ Although care provided by the maternity care provider during childbirth can be an important factor contributing to a positive childbirth experience,⁵⁻⁶ being satisfied with the childbirth experience is not the same as being satisfied with care experienced during childbirth. A woman can be satisfied with her own accomplishment and look back positively on childbirth, but not be satisfied with the care she experienced during her birth. In this study, we focus on clients who experienced midwifery care provided during childbirth as “less than good” care. In the Netherlands, the maternity care system consists of primary, secondary and tertiary care. Healthy women with a normal pregnancy will see a primary care midwife (and no other care provider) during pregnancy and she can choose to give birth at home or in the hospital. During childbirth and the postpartum period, a primary care midwife will provide care assisted by a maternity care assistant in the community or a nurse in hospital. Only when problems occur during pregnancy or childbirth are women referred to secondary care for consultation with, or referral to an obstetrician. Most research about birth satisfaction focuses on women with high levels of satisfaction; few studies are powered to consider those women with lower levels of satisfaction.⁶⁻⁹ Focusing purely on satisfaction with the experienced care may miss the separate but illuminating construct of patient dissatisfaction,⁸ which may highlight problems and inform areas for improvement in the maternity care system.⁸⁻¹⁰

The aim of this study is to understand the relation between client-related factors and the experience of intrapartum midwifery care to give midwives an insight into how they might improve the care they provide during childbirth. Our main research question was as follows: do women who report “less than good” care from their midwife during childbirth differ from women who report “good to best possible” care from their midwife during childbirth in terms of: age, parity, ethnic background, socioeconomic status, living situation (marital status), education level, employment status, whether the pregnancy was planned, symptoms of anxiety or depression postpartum, mode of birth, experienced sense of control during the dilation and pushing phase, and the experienced patient centeredness of the care provider?

METHODS

This study is part of the DELIVER study, which is a large prospective cohort study in the Netherlands set up to investigate the organization, accessibility, and quality of primary midwifery care. Data were collected from clients and their partners, midwives, and other health care professionals across the Netherlands, between September 2009 and April 2011. Clients from 20 midwifery practices assessed their expectations and experiences. These client data were linked to data from electronic client records kept by midwives and collected by the Netherlands Perinatal Register. Methodological details of this study have been published previously.¹¹ The Medical Ethics Committee of VU University Medical Centre, Amsterdam approved the study protocol of the DELIVER study.

Participants, Setting, and Procedure

Participants of our study were women with uncomplicated pregnancies within the DELIVER study population in the Netherlands. The DELIVER study recruited for a 1-year period and depending on when clients began their participation, they may have completed up to three questionnaires at different time points: one questionnaire in the early prenatal period (around 20 weeks of pregnancy), one questionnaire in the late prenatal period (around 34 weeks of pregnancy), and one questionnaire postpartum (around 6 weeks postpartum). Data from the different questionnaires were linked at the personal level. We included all women who responded to the postpartum questionnaire. To focus on primary care providers, we excluded women who began labour in secondary or tertiary care.

Measures

The main outcome variable, the experience of midwifery care provided during childbirth, was measured using a summary rating scale in the postpartum questionnaire which asked participants to: "Please rate your overall feelings about the care provided by your midwife during labour and birth on a scale from 1 to 10, with one indicating the worst possible care and 10 indicating the best possible care." The rating scale functions as a summary: the final question after a set of questions about various aspects of the care received during childbirth. A similar rating scale is a standard item in patient and consumer experience questionnaires, such as the Consumer Quality Index questionnaires.¹² For analysis, the outcome variable, the experience of midwifery care during childbirth (a rating between 1 and 10) was dichotomized. We dichotomized the outcome variable into "less than good" care (rating 1–7) and "good to best possible" care (rating 8–10). This distribution is based on the Dutch school system, where an 8 or above indicates a good to excellent performance and a 7 or less indicates a moderate or bad performance.¹³

The client-related factors potentially correlated with the experience of midwifery care were derived from the literature.^{3–5} Participants provided information about their background char-

acteristics including age, parity, education level, employment status, socioeconomic status, and living situation (marital status); ethnic background; and whether the pregnancy was planned or not.

In the questionnaire at 6 weeks postpartum, information was asked about symptoms of anxiety or depression, mode of birth, the experienced sense of control, and the experienced patient centeredness of the care provider during childbirth.

The client-related factors were dichotomous or categorical variables: parity (nulli- vs multiparous), employment status (employed vs unemployed), having a partner (yes vs no), whether the pregnancy was planned or not, perception to influence your health (yes vs no), and symptoms of anxiety or depression around 6 weeks postpartum (not at all vs somewhat/ very); and age (< 25, 25–35, 36+), education (low included elementary education, or pre-vocational secondary education, middle included secondary education preparing for universities of applied science and research universities, high included bachelor-equivalent or above), ethnic background (native Dutch, Western non-Dutch, non-Western), and mode of birth, categorized as spontaneous vaginal, instrumental vaginal, or caesarean section. The variable “socioeconomic status” consists of four categories of postal code areas. The research organization social cultural planning ordered all the postal codes in the Netherlands from low to high, based on average income, percentage of households with a low income, number of unemployed people, and percentage of households with low educational level. Using this information, the postal codes were divided into quartiles to form a categorical variable.¹⁴

Sense of control was measured, using a shortened version of the Labour Agency Scale.^{10,11} The shorter version of the Labour Agency Scale contains 10 items, and has an internal consistency coefficient of 0.97 and evidence of construct validity.¹⁵ We used the Labour Agency Scale-10 to gain insight into feelings of control during both the dilation and pushing stage of labour. The translation into Dutch resulted in 11 items, because the English item “I felt helpless (powerless)” was translated into two separate items because of the substantive difference in meaning between “helpless” and “powerless” in the Dutch language. The 11 items concerning feelings of control were rated on a 7 point scale (from “almost never” [1] to “almost always” [7]).¹¹ The Labour Agency Scale was analysed, using the summated score. The experienced patient centeredness of the midwife was measured using a patient centeredness scale in which the questions are based on quality indicators about treatment by a particular caregiver at a particular time (for example: Did your midwife listen to you carefully? Did your midwife take you seriously?). The patient-centeredness scale contains seven items measuring frequency on a 4-point scale (“never” [1], “sometimes” [2], “usually” [3], and “always” [4], and has an internal consistency coefficient of 0.9. The patient-centeredness scale was analysed, as required, using the mean score (sum score divided by 7, yielding a continuous variable with a score ranging between 1.0 and 4.0).¹²

Analyses

We compared the client-related factors at baseline between clients who experienced midwifery care provided during childbirth as “less than good” (rating 1–7) with those who experienced the care as “good to best possible” (rating 8–10) (see Table 1). The Pearson’s chi-squared test was used to analyse categorical variables, and because of a negatively skewed distribution of the Labour Agency Scale and patient-centeredness scores, the Mann–Whitney U test was used to analyse continuous variables.

Three variables had > 1 percent missing values: whether the pregnancy was planned or not, symptoms of anxiety or depression, and control during childbirth (see Table 1); we first analysed the complete cases ($n = 1754$) followed by a missing value analysis. We observed that 29 percent of cases had missing data in at least one of the study variables.

We examined the variables with missing data by testing them for associations with other variables, using multiple logistic regression. These associations showed that the data were likely missing at random (MAR).¹⁶ Thus, to minimize bias, multiple imputation was carried out, yielding a data set of 29 newly generated data sets (one for each 1% of respondents with missing data), each containing estimates of the missing data.¹⁷

Our study consisted of two levels of data: midwife practices and individual pregnant women. We used generalized estimating equations, a method that provides standard errors adjusted for the repeated measurements from the same participant, using an exchangeable correlation structure, to control for correlations within midwife practices.

Univariable and multivariable logistic regression analyses were conducted to model the client-related factors independently associated with experience of midwifery care during childbirth. All characteristics mentioned in Table 2 were included in the univariable analysis. We used a forward procedure to analyse the factors in their multivariable context. The quasi-likelihood information criteria value determined model fit with the final multivariable model exhibiting the lowest quasi-likelihood information criteria value. The factor with a p value ≤ 0.05 and the lowest quasi-likelihood information criteria started as the first factor in the model. Each time a factor was added, the changes in all the remaining p values and quasi-likelihood information criteria were assessed. Data were analysed using SPSS 21.0 (SPSS Inc., Chicago, IL).

RESULTS

Of all 14418 eligible clients of the participating midwifery practices, 7685 clients participated by returning at least one questionnaire (response rate 53%).

For about only a quarter of these clients ($n = 1800$), it would be possible to complete all three questionnaires during the 1-year study period. A total of 4146 DELIVER participants completed Questionnaire 3, and after following our exclusion rules for this sub study, 2,377 participants remained (Fig. 1). Participants’ mean age was 30.8 years (SD 4.5) and 45.2 percent

Table 1. Client-Related Characteristics of the Participants in the “DELIVER” Study, Who Responded to Questionnaire 3 and Who Started Their Birth in Primary Care, the Netherlands, 2009–2011. Original Data Set.

	Total N=2377	‘Less than good’ care; rating between 1-7 N=192 (%)	‘Good to best possible’ care; rating between 8-10 N=2185 (%)
Age			
<25	181(7.6%)	15(7.8%)	166(7.6%)
25-35	1840(77.4%)	146(76.0%)	1694(77.6%)
>35	355(14.9%)	31(16.1%)	324(14.8%)
Missing	1	0	1
Parity*			
Nulliparous	1073(45.2%)	111(57.8%)	962(44.0%)
Parous	1303(54.8%)	81(42.2%)	1222(56.0%)
Missing	1	0	1
Nationality			
Native Dutch	2260(95.2%)	182(94.8%)	2078 (95.2%)
Western non-Dutch	59(2.5%)	7(3.6%)	52(2.4%)
Non Western	56(2.4%)	3(1.6%)	53(2.4%)
Missing	2	0	2
Partner			
Yes	2341(98.7%)	185(97.9%)	2156(98.8%)
No	31(1.3%)	4(2.1%)	27(1.2%)
Missing	5	3	2
Education level†			
Low	277(11.7%)	18(9.5%)	259(11.9%)
Middle	812(34.2)	66(34.9%)	746(34.2%)
High	1282(54.1%)	105(55.6%)	1177(53.9%)
Missing	6	3	3
Employment status			
Employed	1931(81.2%)	152(79.2%)	1779(81.4%)
Other than employed	446(18.8%)	40(20.8%)	406(18.6%)
Missing	0	0	0
Socio-economic status*			
Quartile 1 <i>high</i>	623(26.3%)	49(25.8%)	574(26.4%)
Quartile 2	600(25.3%)	33(17.4%)	567(26.0%)
Quartile 3	523(22.1%)	54(28.4%)	469(21.5%)
Quartile 4 <i>low</i>	621(26.2%)	54(28.4%)	567(26.0%)
Missing	10	2	8
Present pregnancy			
Planned	1655(84.9%)	130(84.4%)	1525(84.9%)
Unplanned	295(15.1%)	24 (15.6%)	271 (15.1%)
Missing	427	38	389

Table 1. Client-Related Characteristics of the Participants in the “DELIVER” Study, Who Responded to Questionnaire 3 and Who Started Their Birth in Primary Care, the Netherlands, 2009–2011. Original Data Set. (*continued*)

	Total	‘Less than good’ care; rating between 1-7	‘Good to best possible’ care; rating between 8-10
	N=2377	N=192 (%)	N=2185 (%)
Anxious/moody postpartum*			
Not at all	1178(81.0%)	90(75.0%)	1088(81.6%)
Somewhat /Very	276(19.0%)	30(25.0%)	246(18.4%)
Missing	923	72	851
Influence on your own health			
Much /very much	2047(86.5%)	157(82.2%)	1890(86.9%)
Hardly/not at all	319(13.5%)	34(17.8%)	285(13.1%)
Missing	11	1	10
Mode of birth			
Spontaneous Vaginal	2057(87.1%)	145(75.9%)	1912(88.1%)
Instrumental Vaginal	229(9.7%)	30(15.7%)	199(9.2%)
Caesarean Section	76(3.2%)	16(8.4%)	60(2.8%)
Missing	15	1	14
Intrapartum Patient centeredness scale*			
Mean score (SD)	3.85	3,22(0.713)	3,91(0.25)
Missing	4	0	4
Labour Agency Scale Dilation phase*			
Mean Composite score (min-max)	60.87(11-77)	54.72(17-77)	61.41(11-77)
Missing	95	9	86
Labour Agency Scale Pushing phase*			
Mean Composite score (min-max)	58.51 (11-77)	51.38(11-77)	59.10(11-77)
Missing	142	20	122
Total	2377	192	2185

*Statistically significant at $p < .05$ level

† Educational level: Low= elementary education or pre-vocational secondary education Middle= secondary education prepares for universities of applied science and research universities High = bachelor or master degree.

were nulliparous and 54.8 percent multiparous (Table 1). The large majority of women were Native Dutch (95.2%), had a partner (98.7%), were employed (81.2%), had a planned pregnancy (84.9%) felt like they were greatly or very greatly able to influence their own health (86.5%), had a spontaneous vaginal birth (87.1%), and were not anxious or moody around 6 weeks postpartum (81%). The mean score of the patient centeredness of the care provider during childbirth was 3.9 on a scale from 1.0 to 4.0. The experienced control during the dilation and the pushing phase on a scale from 11 to 77 was 60.87 and 58.51, respectively. More than half of the women were highly educated, while 34.2 percent had middle and 11.7 percent low education levels. Women were divided roughly equally between the quartiles of socioeconomic status.

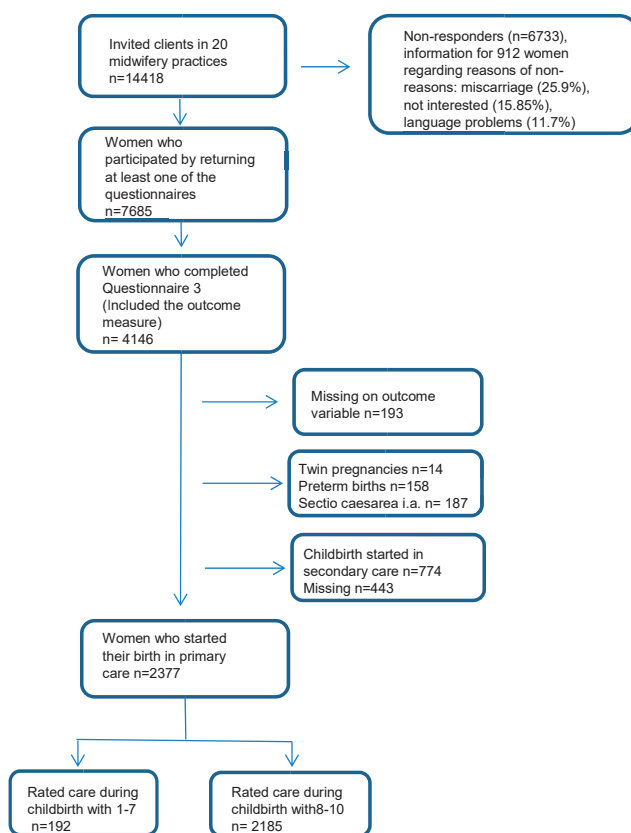


Figure 1. Number of participants in the “DELIVER” study, who responded to Questionnaire 3 and who started their birth in primary care, the Netherlands, 2009–2011.

One hundred and ninety-two women (8%) experienced midwifery care during childbirth as “less than good,” and 2185 (92%) women experienced the care as “good to best possible.”

Compared with women who experienced “good to best possible” midwifery care, those who experienced “less than good” midwifery care during childbirth did not differ significantly in age, nationality, having a partner, education level, employment status, and planning of the pregnancy (Table 1). However, women who experienced “less than good” intrapartum midwifery care were more frequently nulliparous, had a lower socioeconomic status, were more anxious or moody around 6 weeks postpartum, felt less able to influence their own health, had more instrumental or caesarean births, and experienced less patient centeredness and control during childbirth (the dilation and pushing phase).

Multivariable analyses

The complete case analyses performed on the original data set ($n = 1754$) only showed a significant relation between control during the dilation and pushing phase and a “less than good” experience of care.

The “patient centeredness of the caregiver during birth” was excluded from the multivariable model because of a very high correlation with the experience of midwifery care during childbirth. There was no collinearity between the remaining measures.

Using the multiple imputed data set, the univariable analyses found that parity, mode of birth, and Labour Agency (control) during the dilation and the pushing phase were significantly associated with the experience of midwifery care during childbirth (Table 2). In the multivariable logistic regression model, mode of birth and control during dilation and pushing phase during birth remained significant factors in explaining whether women experienced the care during childbirth as “less than good” or “good to best possible” care. The odds were higher to experience midwifery care as “less than good” for women with an unplanned caesarean birth (OR 2.21 [CI 1.19–4.09]), or instrumental birth (OR 1.55 [CI 1.08–2.23]), and women with less sense of control during the dilation phase (OR 0.98 [CI 0.97–0.99]) and pushing phase (OR 0.98 [CI 0.97–0.99]). The control during the dilation and pushing phase was coded as a continuous variable, where the OR shows the level of change per one unit of change in the dependent variable. This means that a woman with a Labour Agency Scale score during the dilation phase of 77 has a 0.22 lower odds to rate the care during birth as “less than good care” than a woman with a Labour Agency Scale score of 11.

Table 2. Client-Related Factors Associated with a “Less than Good” Experience of Midwifery Care during Childbirth. Fixed Effects, Multivariable Logistic Regression Analysis Using Generalized Estimation Equations, Forward Procedure, the Netherlands, 2009–2011. Multiple Imputed Data Set (29 data sets).

Factor	Crude OR (95% C.I.)	Adjusted OR (95% CI)
	Ref. † Rating midwifery care during childbirth with 1-7	Ref. † Rating midwifery care during childbirth with 1-7
Mode of birth		
Caesarean Section	3.16 (1.78-5.57)	2.21 (1.19-4.09)
Instrumental Vaginal ref. Spontaneous Vaginal	1.99 (1.42-2.79)	1.55 (1.08-2.23)
Labour Agency score		
Dilation phase		
Composite score	0.96 (0.95-0.97)	0.98 (0.97-0.99)
Labour Agency score		
Pushing phase		
Composite score	0.96 (0.96-0.97)	0.98 (0.97-0.99)
Age		
>35	1.07 (0.56-2.01)	
25-35	0.93 (0.55-1.72)	
Ref.<25		
Nationality		
Non-western	0.68 (0.23-1.99)	
Western non-Dutch ref. Native Dutch	1.49 (0.51-4.33)	
Parity		
Parous	0.58 (0.42-0.80)	
Ref. Nulliparous		
Education level		
3 High	1.23 (0.69-2.20)	
2 Middle	1.22 (0.68-2.20)	
Ref.1Low		
Partner		
No Partner	1.64 (0.46-5.83)	
ref. Partner		
Employment status		
Unemployed	1.16 (0.85-1.59)	
Ref. Employed		
Socio-economic status		
Quartile 4 low	1.10 (0.86-1.39)	
Quartile 3	1.40 (0.93-2.10)	
Quartile 2	0.71 (0.45-1.11)	
Ref. Quartile 1 high		
Present pregnancy		
Unplanned	1.09 (0.73-1.61)	
Ref. Planned		
Anxious/moody pp		
Somewhat /Very much	1.58 (1.12-2.23)	
Ref. Not at all		

Table 2. Client-Related Factors Associated with a “Less than Good” Experience of Midwifery Care during Childbirth. Fixed Effects, Multivariable Logistic Regression Analysis Using Generalized Estimation Equations, Forward Procedure, the Netherlands, 2009–2011. Multiple Imputed Data Set (29 data sets). (*continued*)

Factor	Crude OR (95% C.I.)	Adjusted OR (95% CI)
	Ref.† Rating midwifery care during childbirth with 1-7	Ref.† Rating midwifery care during childbirth with 1-7
Influence on your own health <i>Somewhat /very much</i> <i>Ref. Hardly/not at all</i>	0.71 (0.51--0.90)	
Patient centeredness scale <i>Composite score</i>	0.03 (0.02-0.06)	

*Significant outcomes in bold † Reference category

DISCUSSION

Women in this national study in the Netherlands, who started their birth in primary care, rated their midwifery care during childbirth with a mean rating of 8.9 (scale from 1 to 10) with 8 percent of the women indicating that they experienced “less than good” care. A high rating of care is typical for studies on birthing experiences.^{6–10} Childbirth is a multidimensional experience, influenced by, but not restricted to, the relationships with and care given by the health care professionals. We were interested in exploring client-related factors associated with “less than good” experience of midwifery care during childbirth.

One of our first observations was that the patient centeredness of the midwife during childbirth, as reported by women, almost fully explained rating of midwifery care. A more women-centred and individualized approach which keeps clients informed and actively involved in their care, would likely increase women’s satisfaction with the maternity care experience.^{18–19}

Our study demonstrated differences in experienced care in relation to mode of birth. We found that women who experienced an instrumental birth, reported intrapartum care by their midwife as “less than good” more often than women who experienced a spontaneous vaginal birth. Furthermore, women who had an unplanned caesarean section were even more likely to indicate that they had received “less than good” midwifery care during childbirth. The international literature is ambiguous with regard to the influence of mode of birth on the experience of childbirth or care during childbirth. Some studies have found that mode of birth itself plays an important role in the final feelings about childbirth.^{20–22} Other studies have found no association.^{23–25} As women with an unplanned caesarean section or instrumental birth in this study will have had care transferred to other care providers during childbirth—most likely without their primary midwife staying on, it is possible that the discontinuity of care between the primary care midwife and the care providers in the secondary care system influenced the rating of midwifery care. An earlier Dutch study showed that referral during labour was significantly

associated with reporting a negative childbirth experience,²⁶ while another older study did not find a difference in satisfaction with the experience because of a referral during childbirth.²⁷ It is possible that women’s expectations for care during childbirth have changed over time.

To our knowledge, this was the first study that assessed the Labour Agency scores among women who experienced the care from their midwife during childbirth as “less than good.” Our finding that women with a lower sense of control during the dilation and during the pushing phase of childbirth were more likely to indicate that they experienced “less than good” midwifery care parallels the international literature about control during birth. A woman’s sense of control during childbirth is internationally consistently described as a major contributing factor to a woman’s childbirth experience and her subsequent well-being.^{3,20,23,28–31}

Parity was not significantly associated with the experience of midwifery care; however, this might represent a type two error resulting from limited power to consider this variable. Birth-related factors were associated with the experience of midwifery care during childbirth more than maternal characteristics. In our sample, age, nationality, having a partner, employment status, planning of the pregnancy, socioeconomic status, and feeling able to influence your own health, were not associated with the experience of midwifery care during childbirth. This is in line with the results of a review by Hodnett et al who described that “personal expectations, the amount of support from caregivers, the quality of the caregiver–patient relationship, and involvement in decision-making, appear to be so important that they override the influence of background and other characteristics, when women evaluate their childbirth experience”.³

The outcomes of this study highlight areas of midwifery care that could improve the experience of women during childbirth. To improve a woman’s sense of control during childbirth, several studies showed that informing women of options and choices available and involving them in decision-making helped women feel more in control.^{32–33} For example, a Dutch study found that having an influence on birthing positions in labour, home birth, and shared decision-making contributed to women’s sense of control.¹ A study from Green et al reported that “the ways in which women are helped to deal with pain will affect internal control; the extent to which they feel that they are actually cared about, rather than care being something that is done to them, will affect external control”.³⁰ Future research should consider how to address the unmet needs of women who undergo instrumental or unplanned caesarean birth, including, for example, approaches to enhance a sense of control, such as extra attention and time, information, involvement in decision-making, continuity of primary care provider, and debriefing the birth experience.

Strengths of our study include the large sample size, which for the most part is representative of the Dutch population of birthing women in the Netherlands in 2010 (mean age: 31.0 [SD 5.0]; 47.5% nulliparous and 52.5% multiparous). Compared with the general population of Dutch women between 15 and 45 years of age, women in our study had a higher level of education (28.2% tertiary level of education vs 22.7 %) and were less likely to be from ethnic minority groups (9.6% Western and 13.1% non-Western).^{34–35}

Our data set is very complete with only three variables having more than 1 percent missing data. To minimize any biases that these missing data might introduce, we used multiple imputation analyses, which are considered superior to limiting analyses to complete cases.³⁶⁻³⁷ A possible limitation in our study was that precoded scales asking for an overall rating of the care experienced may have underestimated the extent of dissatisfaction with particular aspects of care.²² However, our analyses showed that the rating scale is an adequate representation of the larger patient-centeredness scale, which includes seven separate aspects of client-centred care. In addition, because we asked women to rate the childbirth care at 6 weeks postpartum, there could have been a “halo effect,” whereby the experience of care may be difficult to separate from the outcome of childbirth as such, and be biased by the happy encounter with the new-born baby. This may have contributed to an underestimation of the overall number of women who experienced a “less than good” experience of midwifery care. It is likely, however, that those who were least satisfied were captured in the study. We conclude that birth-related factors are associated with the experience of midwifery care during childbirth more than maternal characteristics. And although the vast majority of women were satisfied with the care that they received during childbirth, there is room for midwives to improve care specifically using strategies to enhance sense of control and focusing on the particular needs of those who go on to experience instrumental or unplanned caesarean birth.

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CHAPTER 3

Continuous support during childbirth by maternity care assistants: an exploration of opinions in the Netherlands

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ABSTRACT

Background: The Netherlands maintain a high rate of home births relative to other well-resourced countries. Maternity care assistants (MCAs) play an important role, as part of the maternity care team, assisting the midwife during birth and providing postpartum care to women and babies in their homes. A Cochrane review recently described the advantages of continuous support during childbirth. We were interested in the opinions of MCAs about them having an expanded role to include continuous emotional support during childbirth as well as medical tasks such as checking the condition of the foetus and maternal labour progress through internal examination.

Methods: To explore the opinions of MCAs, four semi structured group discussions took place and 190 questionnaires were sent out to MCAs nationally.

Results: In both the group discussions and questionnaires, MCAs displayed positive attitudes toward providing continuous support during childbirth. In general, MCAs were not keen on adding medical tasks. The importance of a clear distribution of responsibilities between midwives and MCAs was reported. Most (60.0%) thought midwives would appreciate MCAs providing continuous support. Furthermore, 40.5% disagreed with dividing the profession into childbirth care and postpartum care teams. Two-thirds mentioned the need for extra training in childbirth assistance.

Conclusion: In general, MCAs were positive about providing continuous support during childbirth. Most MCAs think that it is unwise to give MCAs additional medical responsibilities. The opinions differ concerning issues of practical organization. MCAs generally thought extra schooling was important to be and feel competent to assist childbirth.

Keywords: midwife; intrapartum care; maternity care; labour support; antepartum management

INTRODUCTION

Research has highlighted the benefits of continuous support during childbirth. Several potential providers of continuous support have been identified in the literature, such as support provided by a companion of the woman's choice

female relatives or friends, nurses, midwifery students, volunteers from the community midwives and doulas.¹ Almost all studies indicated favourable outcomes of continuous support, such as fewer caesarean sections and instrumental deliveries lower rates of oxytocin stimulation, shorter labours, shorter hospital stays, less medication use, reduced use of epidural analgesia, higher frequency of normal delivery, more intact perineums and a lower risk of a baby with a low 5-min Apgar score. Furthermore, continuous support has been associated with higher rates of breastfeeding, better coping with labour, lower pain and anxiety scores, and higher rates of satisfaction.¹

However, conflicting data have also been reported. A large randomized controlled trial ($n = 6915$) in 13 North American hospitals did not find significant medical benefits from continuous support by specially trained labour nurses compared to usual care.² A smaller randomized controlled trial also failed to show benefits, apart from a 17% reduction in oxytocin stimulation, when nurses provide continuous labour support.³ As an explanation, Hodnett suggests that continuous labour support appears to reduce operative birth and increase spontaneous birth when it is provided by caregivers who are not employees of an institution (and thus have no obligation to anyone other than the labouring woman) and who have an exclusive focus on continuous emotional support and have no additional medical responsibilities.¹ Maternity care assistants (MCAs) may fit this criterion because they are not employees of either the midwifery practice or the hospital but employees of the maternity care organization. In this article, we focus on the MCA as a potential provider of continuous support during childbirth.

Maternity care in the Netherlands is different from maternity care in other countries. Not only because there is still a relatively high percentage of home births (24%)⁴ but also because of the autonomy of the midwife as a medical professional, the role of the MCA, and the structure of the Dutch health care system with a clear boundary between primary and secondary care.⁵ Healthy women with uncomplicated pregnancies receive standard maternity care in the Netherlands consisting of an average of 11 or 12 prenatal visits to a midwife, one to three ultrasound scans during pregnancy, childbirth at home assisted by a midwife and an MCA, or in hospital assisted by a midwife and a nurse. In case of a home birth, the MCA is expected to be present at the time of birth to assist the midwife (or general practitioner [GP], which is much less common) during childbirth and to stay with and take care of the mother and the new-born. In the case of hospital birth, the MCA is present when the mother and the baby return from the hospital. Standard care after normal childbirth is approximately four visits at home from the midwife during the following 8 to 10 days, and the help of the MCA for an average of 6 hr a day during 8 consecutive days. Maternity care assistance is part of the standard insurance package,

with a small contribution. The following tasks are assigned to MCAs: nursing care for the baby, nursing care for the mother, breastfeeding support, health education about the baby and about the mother, support with household tasks, receiving visitors, and taking care of other children.⁵

However, although healthy women receive professional support during childbirth from the midwife and MCA or nurse, these professionals are not continuously present during the process of labour. The midwife may be on call for multiple clients and therefore usually does not have sufficient time to stay with the labouring mother during the entire process. However, this is also dependent on the size of the midwifery practice, their caseload, and their work strategy. In general, the midwife will come and go during the first phase of labour and will stay when it can be assumed that the child will be born in the following couple of hours. Nevertheless, there are practices with smaller caseloads in which the midwives already provide continuous support themselves.

After the publication of the Peristat-II study, which showed the national perinatal mortality rate in the Netherlands to be one of the highest in Europe,⁶ the government is focusing largely on the safety of home births and lowering perinatal mortality.⁷⁻⁸ The Dutch Minister of Health has instructed a steering committee ("Steering Committee Pregnancy and Birth") to write a report with recommendations to improve the maternity care system. In their recent report, one of the recommendations was to provide women with continuous support, from the start of active labor.⁹ If continuous support is introduced in the maternity care in the Netherlands, the midwife or the MCA are the most obvious options when it comes to providing continuous support to healthy women during childbirth. Women may possibly favour the midwife because they will have built up a relationship with the midwife during the prenatal period. However, it is not clear whether it is essential to pregnant or labouring women to know the care provider during childbirth.¹⁰⁻¹¹ Furthermore, in a large practice, it is not always feasible for midwives to provide continuous support, when the midwives are on call for several clients and have 24-hr or 48-hr shifts. An approach that uses MCAs to support women may be the easiest and possibly least expensive option. Moreover, if MCAs are present during the dilatation phase, it may be useful for MCAs to perform additional medical (midwifery) tasks, such as internal examination and checking the condition of the foetus with a doptone. Although these additional medical tasks may appear to conflict with Hodnett's statement discussed earlier (regarding the exclusive focus on the task of providing continuous support), this possibility is taken into account because it may be more efficient. The midwife does not have to visit the labouring women often and the MCA can check the condition of the foetus more frequently, as advised by the steering committee (Stuurgroep zwangerschap en geboorte, 2009).⁹ During childbirth, women may focus more on the MCA for emotional support and the midwife can focus more on medical tasks and responsibilities.

The aim of this study was to explore the opinion of MCAs about providing continuous support during labour and performing additional medical tasks. It was hypothesized that MCAs would be positive about these new possibilities.

METHODS

Design

To explore the opinions of MCAs regarding continuous support and additional medical tasks during childbirth, mixed methods were used. Data were derived from semi structured group discussions and questionnaires. The questionnaire was composed using the data gathered in the group discussions.

Population and data collection

Group discussions

The four largest MCA organizations in the North of the Netherlands were approached and all agreed to cooperate. Information was gathered during four semi structured group discussions with MCAs from the four organizations, using a topic list. This list was composed and then piloted with two MCAs. The participants were recruited through the staff of their own MCA organization. Three group discussions consisted of 10 MCAs and one group discussion consisted of 7 MCAs. Participation in the discussions was voluntary and respondents received no compensation for their contribution. Each discussion group was led by an independent researcher and attended by a research assistant—neither of whom took active part in the discussions. The average duration of the discussions was 1 hr.

Questionnaires

Using the information gained in the group discussions, a questionnaire was developed. It was considered that quantitative data would usefully supplement and extend the qualitative analyses. The questionnaire was tested in a small pilot with two MCAs. This survey used the contacts of the DELIVER study, which is a large scale national survey on primary care midwifery in the Netherlands, in which 20 midwifery practices had participated.¹² The practice of the researcher did not distribute questionnaires because several MCAs in the area of the practice already participated in the group discussions. This was done to prevent the same MCAs being involved in the study twice. The other 19 practices were informed by e-mail about the survey and asked for their cooperation. For the two practices that did not wish to participate, an alternative midwifery practice in the area was found on the Internet. In July and August 2010, every midwifery practice received 10 questionnaires (190 in total). The midwives were asked to distribute the questionnaires to the first 10 MCAs they encountered during the postpartum visits. The questionnaires consisted of several background characteristics as well as eight questions and seven statements that could be answered by choosing response options. There was also an opportunity for additional comments.

Analysis

Group discussions

The group discussions were recorded, transcribed verbatim, and analysed manually by means of content analysis. Thereafter, a categorizing system was established based on the topic list with minor adaptations. The adapted topic list was coded and codes were assigned to all text fragments by the researcher.

Questionnaires

The envelopes with completed questionnaires were returned to the researcher. The questionnaire responses were analysed to produce descriptive statistics. The internal consistency of the questionnaire was tested, using Cronbach's alpha, for Questions 4 and 5 (see Figure 1 and 2), the willingness to provide continuous support during childbirth.

RESULTS

Group discussions

Opinion of maternity care assistants

The MCAs were asked if they are willing to provide continuous support during childbirth. The overall response was very positive. There was little resistance among the participants to accompanying women for a longer time during childbirth.

Advantages of continuous support

Commonly mentioned benefits of continuous support were that women would be more relaxed and have less fear during childbirth. Furthermore, the MCAs expected that the early presence of the MCA provides a restful, well-organized environment and there is more time to create a trusting relationship between the woman and the MCA. Most felt that having more opportunities to experience—and provide support at—birth were a major advantage for MCAs. It was indicated that nowadays frequently occurs that the child has already been born when the MCA arrives, which was seen as a shortcoming of the current system. MCAs noted that by introducing continuous support by MCAs, this problem may be solved in the future.

Now, it occurs frequently that I don't have the time to put my gloves on, because the baby is already born. I would like to be in the client's house for three/four hours before the baby is born.

Actually, it is quite logical that if there is someone with you, who has a little more knowledge than you, that you'll have less stress and will be more relaxed.

Disadvantages of continuous support

Some disadvantages of continuous support were also highlighted. MCAs noted that continuous support should only be provided when it is desired by the labouring woman. A frequently mentioned disadvantage was the possibility that there may be no connection or bond between the labouring woman and the MCA. A minority indicated not to be interested in spending a long time with a woman in labour. Reasons mentioned were lack of patience and confidence.

There needs to be a connection. If there is no connection, I don't think it is pleasant. For both, but especially for the woman in labour.

The duration (of continuous support during childbirth—ed.) can be a disadvantage, it can take hours and hours.

3

Organization

To facilitate continuous support during childbirth for all women in primary care, the maternity care system would need to be reorganized. The management of MCA organizations mentioned two options: the first option was that all MCAs provide continuous support during childbirth and postpartum care, and the second option was to create two separate teams, one specializing in childbirth care and the other in postpartum care. Some MCAs were open to a choice of either a childbirth care team or a postpartum care team, but most of the respondents indicated that they did not favour this solution. Most MCAs stated that, particularly, the combination of assistance during childbirth and care postpartum makes their job attractive. To lose one of the aspects of their work was seen as a major disadvantage. On practical matters, workable schedules and working hours were discussed.

I would choose the postpartum care team. I have seen very few births . . . I don't feel adequately equipped.

I think it's especially the combination that is very nice, to have more contact with the family.

Task rescheduling of maternity care assistants

Regarding continuous support during childbirth, most would like to provide this emotional support. Most commented that they were not keen on additional medical responsibilities, such as checking the condition of the foetus or internal examination, they considered these tasks to be the midwives' responsibility. Still, few MCAs were positive about an addition of medical tasks, but they only wanted these responsibilities if proper training would be arranged. Most MCAs expressed the belief that a clear distribution of responsibilities between midwives and MCAs is important during childbirth.

I don't want those responsibilities.

I'm willing to do that (checking the condition of the foetus—ed.), but it must be clear how I should do it. We have to be trained well enough.

Internal examination is really a bridge too far.

Expected opinion of midwives

The MCAs were asked what they thought the opinion of the midwives would be about MCAs providing continuous support during childbirth. Overall, MCAs believed that midwives would appreciate this because it would contribute to a lower workload. A small number of participants suggested that midwives would probably prefer to provide the support themselves.

I think that midwives will like it, because if people call them in panic . . . (pauses) they won't have that anymore.

Retraining

In discussions about the required training, all MCAs indicated that extra training would be essential. Several MCAs mentioned that, also at this moment, they feel that they have an inadequate knowledge concerning childbirth assistance. They sometimes feel incapable while providing childbirth assistance. Their concern was mainly regarding complications and how to act in emergencies. Skills related to communication and coaching were mentioned less often, in their opinion they have sufficient mastery of those skills.

What you can potentially expect when there are complications. Even if it's only a refresher course.

Not that much the social part, but more the medical part, between 8–10 [sic] cm, what can you expect; when to call and when to monitor a little longer.

Questionnaires

Characteristics of the respondents

The sample consisted of 190 MCAs from various regions in the Netherlands. Of the 190 questionnaires, 124 were returned, which resulted in a response rate of 65.3%. The median age of the respondents was 45.5 years and the median work experience was 9.0 years. They worked an average of 83.7 hr every month and 82.1% provided childbirth assistance. The median number of times that an MCA provided assistance during childbirth ($n = 83$) was 10 times a year with a wide range of 2–100 times per year (see Table 1). Table 1 shows that 80.0% of the MCAs indicated that, in their area, continuous support has been introduced or was in development.

Table 1. Respondent characteristics ($n = 124$)

Age	45.5	(20-62)
Median (min- max)	yrs	
Working experience	9.0 yrs	(0-40)
Median (min-max)		
Working hours per month	83.7 hr	(35.7)
Mean (st.dev.)		
MCAs who provide childbirth assistance ($n=123$)	101	(82.1%)
Working in areas where continuous support by MCAs has been introduced or was in development ($n=120$)	96	(80 %)
Number of times assisting childbirth per year median (min-max) ($n=83$)	10	(2-100)

MCAs = maternity care assistants.

More than three-quarters of the respondents would like to be called earlier in the childbirth process, “mostly” or “always” is scored by 93 = 75.6% of respondents (Figure 1). Also, 60.2% of MCAs indicated that they would like to provide more support to women during childbirth “mostly” or “always” (Figure 2). Cronbach’s alpha for these two questions on the topic of continuous support was 0.78. None of the 123 MCAs chose the option “never” to these questions. Several participants, who responded neutral to the question whether they want to give more support during childbirth, reported they would provide continuous support if this was necessary or this was requested by the woman during childbirth.

There was no agreement on organizational aspects of continuous support during childbirth. Almost half (40.5%) of MCAs disagreed with the formation of separate childbirth care teams and postpartum care teams (see Table 2), whereas 38.0% indicated they considered this to be a good option. When asked for their preference, 43.1% responded they would like to work in both teams and only 2.4% preferred the childbirth care team.

In Table 3 the statements are presented. More than three-quarters (“slightly agree” + “agree” = 76.2%) of MCAs indicated that they think women have a better dilation phase when they receive more support. Just less than half (“slightly agree” + “agree” = 42.3%) of MCAs were willing to work 24-hr shifts to allow continuous support. Almost two-thirds (“slightly agree” + “agree” = 60.0%) of those who responded, expressed the belief that midwives would be positive about continuous support provided by MCAs. Furthermore, most (“slightly agree” + “agree” = 59.0%) indicated that childbirth assistance should require special training and become an area of specialization, with also 28.2% disagreeing. Information was gathered about the ambition of MCAs to perform additional medical tasks during childbirth, such as checking the condition of the foetus. Nearly half of respondents (“slightly agree” + “agree” = 49.6%) reported that performing this task would be too much responsibility for MCAs and the need for proper training was mentioned frequently in the comments.

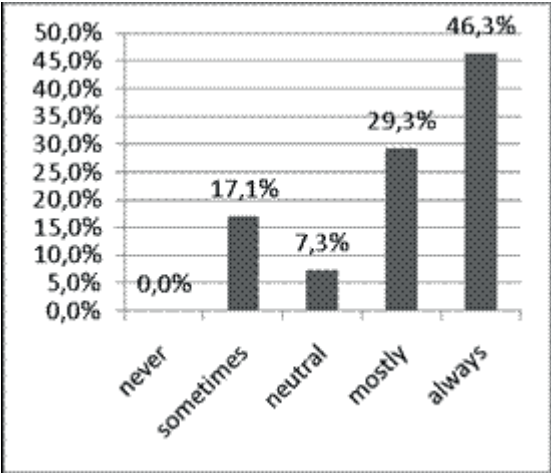


Figure 1. Do you want to attend the birth at an earlier stage? (n = 123)

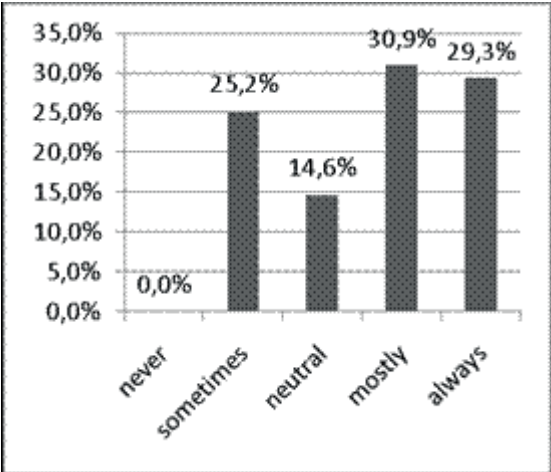


Figure 2. Are you willing to give more support to women during childbirth? (n = 123)

Table 2. Formation of teams

Agree with separation into childbirth care team and postpartum care team?(n=121)	Yes	: 46 (38.0%)
	Neutral	: 26 (21.5%)
	No	: 49 (40.5%)
In which team would you like to work?(n=123)	Childbirth care team	: 3 (2.4%)
	Postpartum care team	: 28 (22.8%)
	Both (I like both)	: 53 (43.1%)
	Neither	: 39 (31.7%)
	(I do not agree with this separation)	

Modus in bold

Table 3. Statements

	Disagree	Slightly disagree	Neutral	Slightly agree	Agree
1. Women endure better with more support n=122	0(0%)	1(0.8%)	28(23.0%)	52(42.6%)	41(33.6%)
2. Willing to work in 24 hr shifts n=123	28(22.8%)	10(8.1%)	33(26.8%)	17(13.8%)	35(28.5%)
3. Midwives are positive about continuous support by MCAs n=120	1(0.8%)	1(0.8%)	46(38.3%)	27(22.5%)	45(37.5%)
4. Midwives believe continuous support is their responsibility n=117	26(22.2%)	29(24.8%)	45(38.5%)	13(11.1%)	4(3.4%)
5. All MCAs should be capable to provide childbirth assistance n= 120	1(0.8%)	3(2.5%)	10(8.3%)	23(19.2%)	83(69.2%)
6. Continuous support should become an area of specialization n=117	19(16.2%)	14(12.0%)	15(12.8%)	34(29.1%)	35(29.9%)
7. Performing additional tasks is too much responsibility n=121	20(16.5%)	15(12.4%)	26(21.5%)	21(17.4%)	39(32.2%)

Modus in bold

Statements

1. Women endure better if they get more support during the dilation phase.
2. I am willing to work 24 hour shifts (like midwives) to make continuous support possible during childbirth.
3. Midwives are positive about continuous support during childbirth by MCAs.
4. Midwives believe that continuous support during childbirth is their responsibility and not the responsibility of the MCA.
5. All MCA should be capable to provide childbirth assistance.
6. Childbirth assistance should become an area of specialization within maternity care assistance with additional training.
7. Performing additional tasks such as checking the condition of the foetus, is too much responsibility for MCAs.

DISCUSSION

Previous studies have noted the importance of continuous support during childbirth. However, it is not clear who is the best provider of continuous support in the context of the Dutch maternity care system. The most appropriate provider may also vary depending on the size, workload, and work strategy of the midwifery practices.

This study was designed to explore the opinions of MCAs on continuous support during childbirth and their interest in a widening of medical responsibilities during childbirth. As Hodnett states, continuous support appears to be more effective when it is provided by caregivers who are not employees of an institution.¹ Because MCAs are not employees of either the midwifery practice or the hospital, they may partly fit this criterion.

It was hypothesized that MCAs would be positive about providing continuous support. This was confirmed by this study. However, based on this study it appears that MCAs are not interested in taking on additional medical tasks such as checking the foetal condition and performing internal examinations. The reasons mentioned included insecurity, mainly because of lack of experience and training. An important issue is the means by which continuous support can be realized. This issue produced large differences of opinion. On the one hand, the formation of two different teams was mentioned (for support during childbirth and for postpartum care),

with the advantage of specialized assistance during childbirth. On the other hand, this division was considered to be potentially disadvantageous to clients and MCAs. Regarding the formation of two teams, the clients may experience discontinuity in care between childbirth care and postpartum care. MCAs may be forced to choose between childbirth care and postpartum care, which would result in work that is less diverse. Furthermore, this division may also present a problem with workable schedules and working hours.

The study had several strengths, such as the triangulation of methods and respondents. Furthermore, the background characteristics of MCAs in the questionnaire did match earlier research.¹¹ The outcomes may be representative for a larger group of MCAs, as the four group discussions reproduced corresponding outcomes.

However, there were also some limitations. Regarding the questionnaires, no data were gathered on geographical location, so no analysis could be undertaken on regional differences. In addition, the analysis and coding of qualitative data were carried out by the primary investigator without the assessment of an external expert.

This study has some implications for policy and future research. MCAs frequently mentioned the importance of extra schooling to be and feel competent to assist in childbirth. This may indicate a gap in the MCAs training and therefore represents an important issue for future investigation. In addition, 80.0% of the MCAs indicated that in their area, continuous support by MCAs has been introduced or was in development. These implementations took place in response to the report of the steering committee. Continuous support by MCAs was already implemented without assessing the best person to provide this support. Primarily, research is needed about clients' preferences and midwives' perspectives. In addition, the MCAs revealed a strong need for extra training in childbirth assistance, these issues need to be resolved before continuous support provided by MCAs is being implemented. Also, studies need to be carried out to investigate the effects of continuous support by MCAs on the quality of maternity care, maternal and foetal condition, number of referrals to the hospital, childbirth experience and satisfaction with care. The recommendation to the MCA organizations is to explore the practical issues surrounding the provision of continuous support by MCAs. There should be particular focus on the pros and cons of separate childbirth care teams and postpartum care teams, especially because only 2.4% responded positively to the question whether they were interested in a childbirth care team. It was important to the MCAs to explore what effect there would be on their schedule, working hours, training, and salary.

Conclusion

In general, MCAs were positive about providing continuous support during childbirth. Most MCAs think it is unwise to give MCAs additional medical responsibilities.

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CHAPTER 4

Women's perspectives on support during and the first hours after childbirth in northern Netherlands.

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Submitted

ABSTRACT

Aims: to quantify women's preferences and preparations for support during labour and the first hours after childbirth and to quantify the specific preference for continuous support. Also the association with parity and the intended place of birth is studied.

Design: Cross-sectional survey.

Methods: Twelve midwifery practices in the northern Netherlands recruited pregnant women.

Measurements of the structured questionnaire were preparation for childbirth and preference for support (timing, including continuous support, provider and type of support)

Results: 205 of the 247 eligible women participated. Nulliparae, significantly more often than multiparae, aimed to prepare themselves by attending prenatal classes (63% versus 21%) and by writing a birth plan (59% versus 40%). Women preferred to receive various types of support during childbirth from their partner (100%), midwife (95%), maternity care assistant (29%) and nurse (15%). The women preferred the midwife to be present; from the moment the midwife (48%) or the woman, herself (22%) indicates. 10% of the women preferred continuous support from 4 cm dilatation.

Conclusion: We consider the best approach to continuous support that it should be available on request rather than being not available or being the standard care.

Keywords: midwifery, patient perspectives, support, survey designs.

INTRODUCTION

One of the most important predictors of a woman's satisfaction of her labour and childbirth is the quality and level of support she received from her partner and from medical and birth professionals (e.g., doctors, midwives, nursing staff, doulas).¹

A Cochrane review highlighted the benefits of continuous support during childbirth, such as shorter duration of labour, more spontaneous vaginal births, fewer instrumental births and caesarean births, reduced use of intrapartum analgesia and a lower risk of neonatal asphyxia.² Furthermore, continuous support has been associated with higher rates of breastfeeding, better coping with labour and higher rates of satisfaction. Bohren suggested that continuous labour support appears to reduce operative birth and to increase the rate of spontaneous births, especially when it is provided by care workers who are not employees of an institution (and thus have no obligation to anyone other than the labouring woman), and who have an exclusive focus on this task, with no additional duties.²

In 2009, in the Netherlands, continuous support was recommended in a report from a Steering group instructed by the Dutch Minister of Health. This Steering group was initiated to investigate and report on ways to improve the maternity care organisation in the Netherlands. One of their recommendations was to provide continuous support to women during the entire active labour as the standard care (see Textbox).³

In the Netherlands, the maternity care system consists of primary and secondary care. During the entire childbirth and the first hours postpartum, the care for low-risk women is provided by a primary care midwife assisted by a maternity care assistant or, in the case of childbirth in the hospital, by a nurse. Only when problems occur during pregnancy or childbirth women are referred to secondary care for consultation with, or referral to, an obstetrician.⁴⁻⁵ In the Netherlands, it is common among low risk women that professionals are not continuously present in the room (at home or in hospital) during the entire process of labour. Generally, the midwife will visit the woman during the first phase of the labour process and will stay with a woman in labour when it can be assumed that the child will be born in the following couple of hours. However, this is also dependent on other factors, such as the size of the midwifery practice, their caseload and the work strategy of the practice.⁶ The maternity care assistants task during childbirth is to assist the midwife during home birth. During a hospital birth, the midwife is assisted by a maternity care assistant or by a hospital nurse, depending on local protocols. The maternity care assistant usually arrives during the second stage of labour.⁷

Also the Steering Group pointed out the maternity care assistant or nurse as the provider of continuous support during and the first hours after childbirth instead of the midwife (probably because of the lower costs),³ however it is not clear which provider the women prefer to receive support from.

Aims

Little is known about to what extent women prefer continuous support during the entire phase of active labour and by whom. The aim of this study is to explore the women's perspective on support during and the first hours after childbirth e.g., by which provider, timing and type of supportive activities. The research question this study addresses is twofold: What are the preferences and preparations for support during and the first hours after childbirth of pregnant women in primary midwifery care in northern Netherlands, and do women indicate a specific desire for continuous support during labour (from 4 cm dilation onwards). We also aim to investigate whether women's preferences and their preparations for this support during and the first hours after childbirth are associated with parity and the intended place of birth.

Textbox; citation of the Steering group (2009) about 'continuous support':-

"The delivery starts with the beginning of the active phase of labour (in the Netherlands this is defined as 3-4 cm), after the complete softening of the cervix. This moment is determined in primary care by a midwife. From that moment on, the women should be provided with continuous support as the standard care. For childbirth in primary care (home, birth centre or birth clinic), the provider should be the maternity care assistant, and for a hospital delivery in primary care support should be provided by the obstetric nurse or maternity care assistant. This is already possible, but it is used too little." The midwife monitors the progress and medical condition.

METHODS

Design

We performed a cross-sectional survey by using a structured questionnaire.

Participants

Purposive-sampling took place in 12 midwifery practices in the three northern provinces of the Netherlands in 2011. The 12 practices were equally distributed across the three provinces. In addition, at least one rural practice and one urban practice were selected in each province. The participants were pregnant women with labour planned in primary care. Inclusion-criteria were at least 18 years of age, at least 30 weeks pregnant and able to read and write Dutch. Midwives and practice assistants recruited participants during their antenatal visit in the midwifery practice. The midwifery practices kept track of the number of women who were asked to participate and the number women who declined participation, in order to gain insight into the participation rate of eligible persons.

We calculated the required minimal sample size for this exploratory study in order to be able to estimate with adequate precision the percentage of women that appreciated support during childbirth. For this estimation, we used the most unfavourable distribution of 50% of individuals who appreciated support versus 50% not did not. We specified an α of 5% and a desired precision of 7%. This resulted in a minimal sample size of 196 participants.

Data collection

To explore the preference and preparations for support during and the first hours after childbirth by pregnant women in northern Netherlands, a questionnaire was developed. The questionnaire items were derived from the literature,^{2, 8-10} from six semi-structured interviews with pregnant women and from the input of two field experts. We tested the questionnaire for intelligibility in four pregnant women. To determine their perception of support, a think-aloud test was also organised. The think-aloud technique encourages participants to think and to reflect back on the choices they make in answering individual questions within a questionnaire and to discuss their thinking about each question and their responses.¹¹ The feedback was subsequently used to adapt the questionnaire.

At the beginning of the questionnaire, the aim of the study was explained. The questionnaire consisted of 30 items subdivided into three domains:

1. Background information included age, having a partner, nationality, educational level and employment, and information on the current pregnancy included expected date of birth and parity.

2. Preparation for (support during) childbirth included the appreciation for information about support during birth, attendance of prenatal education, planned location of childbirth and writing a birth plan.

3. Preference for support during and the first hours after childbirth, e.g., by which provider, timing and type of supportive activities. To assess the preference for support during and the first hours after childbirth, women were asked from which provider they would like to receive support during and after the first hours childbirth and the desired timing of such support. They could choose their preference(s) regarding the potential providers from the following categories; partner, mother, friends/family (other than mother), midwife, maternity care assistant, nurse, doula or other. Women were allowed to choose one or more providers for each type of support. A definition of a doula was given in the questionnaire as 'someone who is educated to support a woman in labour and her partner'. To study the preferences for timing of the support, and to study if women indicate a specific desire for continuous support women were asked to indicate at which moment they wanted the midwife and the maternity care assistant to stay present during labour. Women were presented the following options: from moment the midwife decides, from moment the women herself indicates, from 4 cm dilation onward, our definition of continuous support (start active labour), from 7 cm dilation onward (just before transitional phase), from the start of pushing onward (second stage of labour), immediately after childbirth, other or "I don't know". Additionally, women were asked to indicate the type of supportive activity they preferred, when and by whom. The various options of supportive activities available were: advocating for the women, be empathic, positive and involved during birth, attitude/encouragement, assistance with breathing, assistance with changing positions and taking a shower during labour, providing guidance and information, monitoring maternal and foetal-wellbeing, involving the partner, nurturing and help with preparations for the baby

(e.g., preparing a warm environment, the baby scale and the crib) and assistance at home during the postpartum period.^{2, 8-10} Data were entered in SPSS 22.0 (SPSS Inc., Chicago, IL) and one in three entered questionnaires were checked for data entry errors.

Data analysis

Categorical variables were reported in absolute numbers and percentages and continuous variables as mean and standard deviation (SD) if normally distributed, and as median and min-max if not normally distributed. Pearson's chi-square test and Fisher's exact test were used to test differences the most relevant outcomes according to parity (nulliparous/primi- or multiparous) and intended place of birth. The level of statistical significance for the analysis was set at $P < 0.01$ (two-sided).

Ethical considerations

In the Netherlands, no ethical approval is required regarding this type of research (<http://www.ccmo.nl>). To secure (1) informed consent and (2) confidentiality requirements, privacy was guaranteed in accordance with Dutch legislation. We adhered to the following procedure: 1. The midwives and practice assistants explicitly stated that participation in this study was voluntarily. They provided the women with documents that included information about the study, the informed consent procedure and the questionnaire. 2. No names of the women were collected to ensure anonymity. Midwives' anonymity was maintained using anonymous practice and personal identifiers.

RESULTS

Study population

Figure 1 shows the flowchart. In total, 205 of the 247 eligible women participated in the study. Six women did not fulfil the inclusion criteria. Thirty-six women declined participation. Two of the 12 midwifery practices did not keep a record of the women who declined. Therefore, data on the background characteristics were available for 26 of the 36 women. The women who declined participation were significantly younger (27.2 years versus 29.6 years), less frequently of Dutch nationality (88% versus 97%) and more frequently nulliparous (73% versus 50%) than the participating women.

Table 1 shows the characteristics of the 205 low-risk pregnant women in our study population. The mean age of the women in our study population was 29.6 (SD 4.7), 3% had a non-Dutch nationality and 45% of the women were highly educated. The proportion of nulliparous women was 50%.

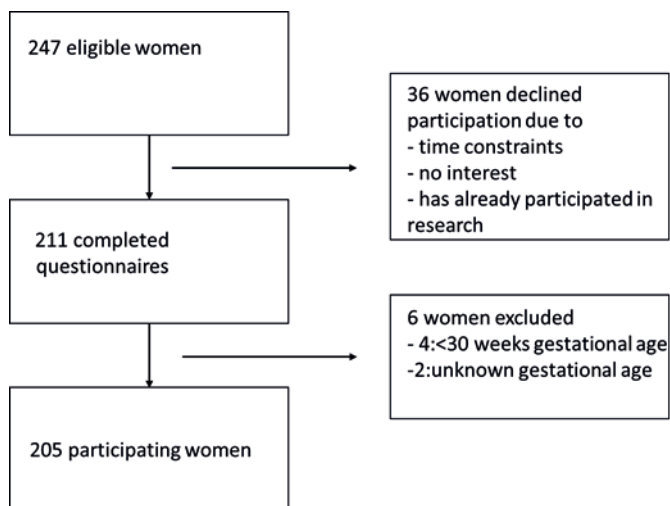


Figure 1. Flowchart of the eligible women in 12 midwifery practices in the northern part of the Netherlands

Preparation for (support during) childbirth

Table 2 shows the preparation and preferences for support (provider and timing) in our study population. With regard to the preparation for support during childbirth, nulliparous women more often than primi- or multiparous women, aimed to prepare themselves by gathering information (40 versus 24%; $p = 0.019$), writing a birth plan (42 versus 22%; $p = 0.027$) and/or signing up for prenatal education classes (63 versus 21%; $p < 0.001$).

Provider of support

Most women preferred support from their partner (100%) and midwife (95%) and less mentioned was support from a maternity care assistant (29%), a nurse (15%), mother/family (16%) or others (19%). None of the women reported the doula as a potential person who could provide support during childbirth.

Women had different preferences regarding the assistance of a maternity care assistant at home and from a nurse in the hospital during and after childbirth. While 70% of the women with a planned home birth preferred the support of the maternity care assistant during birth, only 21% of the women with a planned hospital birth preferred the nurse to provide this support (Table 2).

Timing of support

Women preferred to initiate the support from the moment midwife indicates (48%), moment she herself indicates (22%), 4 cm dilation, continuous support (10%), 7 cm dilation (5%), pushing phase (3%), or other/ I don't know (12%). Only 10% of the women specifically indicated to prefer continuous support as defined in the Steering group report (from 4 cm dilation). Table 2 shows that more nulliparous than primi- or multiparous women preferred the midwife to

decide when this support should start (55% versus 41%; $p=0.002$). More primi- or multiparous women stated that they would prefer to decide themselves (29 versus 15%; $p=0.002$) when this support should start. This did not significantly differ between women with a planned home and a planned hospital birth. Likewise, 31% of the women would leave it to the midwife to decide about the arrival of the maternity care assistant.

Table 1. Background and pregnancy-related characteristics of 205 low-risk pregnant women in northern Netherlands

Background characteristics		Total n=205	(%)	Nulliparous n=102	(%)	Multiparous n=103	(%)	Dutch women in general (%)
Age mean (SD)		29.6	(4.7)	28.7	(4.8)	30.6	(4.3)	31.0 (5.0)
Nationality	Dutch	200	(97)	101	(99)	99	(96)	(75)
	Non-Dutch	5	(3)	1	(1)	4	(4)	(25)
Parity								
Nulliparous		102	(50)					(48)
Living situation	Partner	92	(45)	90	(88)	2	(2)	
	Partner and children	103	(50)	5	(5)	98	(95)	
	Alone	7	(3)	7	(7)	0	(0)	
	'Alone' with children	3	(2)	0	(0)	3	(3)	
Highest level of education [†]	Low	27	(13)	9	(9)	18	(18)	
	Middle	86	(42)	35	(34)	51	(50)	
	High	92	(45)	58	(57)	34	(33)	(33)
Employment	Employed	166	(82)	85	(84)	81	(80)	
	Unemployed	36	(18)	16	(15)	20	(20)	
	Missing	3		1		2		
Gestational age weeks + days								
Mean (SD; days)		35+3	(20)	35+4	(20)	35+2	(20)	
Planned place of childbirth								
Home		87	(42)	33	(32)	54	(52)	
Hospital		112	(55)	66	(65)	46	(45)	
Not yet decided		6	(3)	3	(3)	3	(3)	
Midwifery practice								
Practice with 1 midwife		19	(9)	5	(5)	14	(14)	
Practice with 2 midwives		41	(20)	24	(24)	17	(17)	
Group practice, with 3 or more midwives		145	(71)	73	(72)	72	(70)	

[†] Educational level: Low = elementary education or pre-vocational secondary education; Middle = secondary education prepares for universities of applied science and research universities; High = bachelor or master degree.

Table 2. Preparation and preferences for support (provider and timing) among childbirth low-risk women in the last trimester of pregnancy, according to parity and intended place of birth.

	Total (n=205) %	Nulliparous (n=102) %	Multiparous (n=103) %	p-value†	Home (n=87) %	Hospital (n=112) %	p-value†
Preparation for support during labour							
Appreciation of information							
Yes	32	40	24	.019	30	34	.706
No	31	24	39		35	30	
I don't know	37	36	37		35	37	
Birth plan							
Yes	33	42	22	.027	23	40	.080
No, but I will	17	17	18		16	17	
No, and I will not	50	41	60		61	43	
Attended prenatal education							
Yes	42	63	21	<.001	33	47	.036
No	58	37	79		67	53	
Preferences for support during and after childbirth							
Company during birth							
Partner	100	100	99	.318	100	99	.380
Midwife	95	95	95	.987	99	94	.072
Maternity care assistant	37	29	44	.034	70	12	<.001
Nurse	12	15	9	.184	0	21	<.001
Mother/Friend/family	16	17	16	.664	14	16	.901
Other	3	5	1	.119	2	4	.699
Moment midwife present							
Moment midwife indicates	48	55	41	.002	49	48	.814
Moment I indicate	22	15	29		23	22	
4 cm dilation (continuous support)	10	7	13		9	10	
7 cm dilation	5	3	7		7	3	
Pushing phase	3	3	3		2	4	
Other/ I don't know	12	18	7		9	14	
Moment maternity care assistant present							
Moment midwife indicates		31	44	.004	57	23	<.001
Moment woman herself indicates		7	7		5	10	
Certain time point during birth		4	16		16	3	
Short after birth		23	15		12	25	
When arriving home from hospital		13	8		0	24	
Other/ I don't know		22	10		11	16	

Significant p-values in **bold**

† Pearson's chi-square test or Fisher's exact test

‡ missing intended place of birth (not yet decided) n=6

Supportive activities

Almost all types of supportive activities during and the first hours after childbirth were selected by the majority of the women, from 81% of the women wanting to receive the support of advocating for her to 97% of the women wanting to receive positive encouragement. From their partner, in particular, women desired physical support, such as a massage and assistance with taking a shower (Table 3). Women also would like their partners to be positive and in-

volved, to encourage them, help them with breathing and advocating for them. In addition to the support of their partners, women desired to receive ample support from the midwife, including monitoring maternal and foetal wellbeing and providing relevant information, as well as encouragement and practical help such as changing positions and nursing care. The focus of the preferred supportive activities from the maternity care assistant was mostly concentrated on the postpartum period. The highest percentage of preferred 'support' from the nurse was for monitoring maternal and foetal wellbeing.

Table 3 Preferences for supportive activities during and the first hours after childbirth, by parity and intended place of birth

	Parity				Intended place of birth ‡		
	Total	Nulliparous	Multiparous	p-value†	Home	Hospital	p-value†
	(n=205) %	(n=102) %	(n=103) %		(n=87) %	(n=112) %	
Advocating for the woman	81	83	78		80	81	
Partner	76	78	74	0.413	79	74	0.416
Midwife	33	28	37	0.180	35	32	0.685
Maternity care assistant	20	19	22	0.600	22	20	0.673
Nurse	7	6	9	0.421	1	13	0.003
Mother/family	10	11	10	0.818	7	12	0.201
Positive attitude/encouragement	97	98	95		97	96	
Partner	92	94	90	0.298	92	93	0.793
Midwife	85	83	87	0.429	87	84	0.518
Maternity care assistant	39	30	47	0.015	55	26	<0.001
Nurse	21	19	23	0.489	5	33	<0.001
Mother/family	14	15	13	0.684	12	14	0.583
Help with breathing/change positions / taking a shower	87	93	81		83	90	
Partner	66	73	60	0.054	59	71	0.074
Midwife	70	73	67	0.361	64	75	0.092
Maternity care assistant	25	18	32	0.015	36	17	0.002
Nurse	15	14	16	0.693	1	26	<0.001
Mother/family	6	7	5	0.552	4	7	0.266
Providing instructions/information	94	93	95		93	97	
Partner	7	9	5	0.268	2	11	0.022
Midwife	92	89	94	0.205	91	95	0.283
Maternity care assistant	22	15	28	0.017	30	14	0.007
Nurse	16	13	20	0.183	4	27	<0.001
Mother/family	3	4	1	0.369	1	4	0.390
Monitoring maternal + foetal wellbeing	91	87	94		89	94	
Partner	2	4	0	0.121	1	3	0.634
Midwife	85	79	90	0.032	86	86	0.947
Maternity care assistant	20	16	25	0.116	29	14	0.011
Nurse	23	23	24	0.868	5	38	<0.001
Mother/family	1	2	0	0.498	0	2	0.506

Table 3 Preferences for supportive activities during and the first hours after childbirth, by parity and intended place of birth (*continued*)

	Parity			p-value†	Intended place of birth ‡		
	Total	Nulliparous	Multiparous		Home	Hospital	p-value†
	(n=205) %	(n=102) %	(n=103) %		(n=87) %	(n=112) %	
Involvement partner	83	89	77		78	88	
Partner	20	19	22	0.600	17	21	0.484
Midwife	69	74	64	0.131	66	71	0.437
Maternity care assistant	23	18	28	0.094	34	13	0.001
Nurse	15	15	16	0.845	4	24	<0.001
Mother/family	4	4	4	1.000	2	5	0.470
Nursing: feeding/washcloths/massage	87	89	84		87	87	
Partner	84	88	80	0.124	85	84	0.855
Midwife	18	13	23	0.066	15	21	0.327
Maternity care assistant	20	17	24	0.221	31	13	0.001
Nurse	9	9	10	0.810	2	15	0.002
Mother/family	10	10	11	0.818	8	12	0.422
Postpartum help and preparations	94	94	94		98	91	
Partner	61	65	57	0.251	58	63	0.452
Midwife	20	21	19	0.724	16	23	0.228
Maternity care assistant	83	79	87	0.133	92	77	0.005
Nurse	18	13	23	0.066	2	30	<0.001
Mother/family	16	19	13	0.248	9	21	0.031

Significant p-values in **bold**

† Pearson's chi-square test or Fisher's exact test

‡ missing intended place of birth (not yet decided) n=6

Nulliparous and multiparous women were significantly different in the preferred support from the maternity care assistant. Most observed differences between nulliparous and multiparous women can be explained by the difference in planned place of birth-because women who plan their births at home might expect support from a maternity care assistant, and women who plan their birth in the hospital might expect their support from a nurse. Therefore, a post hoc analyses was performed and the preferred supportive activities were compared between the maternity care assistant at home and the nurse in the hospital (Table 4).

Women with a planned home birth did prefer more support from the maternity care assistant than women with a planned hospital birth preferred support from the nurse, in particular more positive attitude/encouragement, more nursing and postpartum assistance and assistance with preparing for the baby.

Table 4. Comparing the preferred of supportive activities of Maternity care assistant at home with the preferred support from the nurse in the hospital. †

	Maternity care assistant at home (n=87) %	Nurse in the hospital(n=112) %	p-value‡
Preferred supportive activities			
Advocating for the woman	22	13	0.073
Positive attitude/encouragement	55	33	0.001
Help with breathing/ change positions/taking a shower	36	26	0.091
Providing instructions/information	30	27	0.278
Monitoring maternal and foetal wellbeing	29	38	0.077
Involvement partner	34	24	0.110
Nursing: feeding/washcloths/massage	31	15	0.011
Postpartum help and preparations baby	92	30	<0.001

† In the questionnaire, the Maternity care assistant and nurse were two of the five persons (partner, midwife and mother/family) the women could choose from to provide the supportive activities.

‡ Pearson's chi-square test

DISCUSSION

This is the first study that has explored the preferences for support and preparations for childbirth in a group of Dutch women in the northern part of the Netherlands. Nulliparous women, more often than primi- or multiparous women, prepare themselves by gathering information, developing a birth plan and/or signing-up for prenatal education classes. Most women indicated to prefer support from their partner (100%) and midwife (95%) and less mentioned was support from a nurse, a maternity care assistant, family/ friends or others. Women selected various types of supportive activities during and the first hours after childbirth; physical support, being positive and involved, encouragement, help with breathing, advocating for the woman and from childbirth professionals also, monitoring maternal and foetal wellbeing and providing relevant information, and nursing care. The focus of the preferred supportive activities from the maternity care assistant was mostly concentrated on the postpartum period. The highest percentage of preferred 'support' from the nurse was for monitoring maternal and foetal wellbeing. Women with a planned home birth did prefer more support from the maternity care assistant than women with a planned hospital birth preferred support from the nurse. It is currently recommended to provide all women with continuous support during childbirth as the standard care.³ In our study, only 10% of the women indicated to prefer continuous support as defined by the Steering group. Therefore, we cannot conclude that all women in northern Netherlands prefer to receive continuous support from 4 cm dilatation onward during childbirth. The best approach might be that continuous support should be available for each woman. So that each individual woman may decide in pregnancy and during labour what is best for themselves.

Many women preferred to leave it to the midwife to decide whether to stay rather than make appointments at a certain time point during labour (at 4 cm or 7 cm dilation). This may be due to a lack of information received by the women, a great confidence in the midwife's ability to do what is right, similar to reports from international studies,¹²⁻¹³ or women may have a high self-efficacy. On the other hand it is also conceivable that women will not ask for options they do not consider possible in practice¹³ and it might be difficult for women to indicate what they need during childbirth if they have not experienced childbirth before.¹² However also multiparous women did not directly express the desire to receive continuous support during childbirth. None of the participants in the present study indicated the need for support offered by a doula, which could also be a lack of knowledge or women felt they had adequate access to receive support in the maternity care system in northern Netherlands. There are few doula practices in the Netherlands. Women often have to pay themselves the costs of the doulas (around €700).¹⁴ That is one reason why they are not common in the Netherlands. There are several studies that show that women want more support,¹⁵⁻¹⁸ but this does not come directly from our research. This discrepancy in findings can be explained by the 'Dutch system', where women may already receive enough support from the midwife. This can also be explained by the attitude of the Dutch women that they may need less support. Birth is a natural process, what they want to do together with their partner. In general, the pregnant women saw the focus of the care provided by the maternity care assistant during the postpartum period. The maternity care system in the Netherlands has included maternity care assistants in the system to assist the midwife during birth and the first hours postpartum. Furthermore they support women up to 8 days postpartum. In other countries (e.g. Canada, Iceland) sometimes a second midwife assist with the homebirth and the first hours postpartum. In hospital the maternity care system during birth varies between countries. Sometimes a midwife with an assistant are present with a hospital birth, sometimes one midwife. Therefore, the results of this study cannot so easily generalized to other countries. Women with a planned home birth preferred to receive more support from their maternity care assistant than women with a hospital birth expected to receive from their nurse. They particularly preferred encouragement and being positive and empathic during and after birth. Women may also expect, or have experienced, more focus on monitoring maternal and foetal wellbeing from the nurse compared with the maternity care assistant. There are options to extend the quantity of support from the maternity care assistant for the women who appreciate that type of support. The difference in preferred supportive activities of maternity care assistant at home with the preferred support from the nurse in the hospital can be explained by training differences in professions. The maternity care assistant has a middle level of education, more practical with the focus on caring. And the nurse has a bachelor degree more theoretical education. The nurse may carry out reserved medical procedures that can only be carried out by an expert. Examples of reserved procedures are injections, catheterise and administering anaesthetics.¹⁹ One-third of the women reported that they would appreciate receiving more information about support during childbirth. The information about support

during childbirth could be provided on websites, leaflets or during antenatal classes. Because the half of the women are willing to write a birth plan, the information could also be discussed individually when discussing the birth plan. In this study, only a third of the women developed a birth plan. An explanation for this finding can be that the recommendation to give information about writing a birth plan to women was introduced in 2009 in the Netherlands.³ With the results of this study, we are able to inform care providers and stakeholders about the preferences of the women. Based on our findings we consider continuous support that is available for each woman to be the best approach, so that each woman can decide in pregnancy and during labour what is best for her. The challenge is providing continuous support by midwives because the caseload for the midwives in the Netherlands is currently too high to provide continuous support for all women.²⁰ The caseload is determined by The Dutch Healthcare Authority (NZa), an autonomous administrative authority and part of the Dutch Ministry of Health, Welfare and Sport. A caseload midwife in the Netherlands should assist 105 births per year in order to get enough income. For a normal salary, the caseload has to be lowered so that more midwives are able to provide continuous support. There are enough midwives. In other countries like Australia the caseload is determined around 50, instead of 105.

Strength and limitations

We could collect data from a relatively large population of 205 low-risk pregnant women from midwifery practices in the northern part of the Netherlands, varying in size and degree of urbanisation. The study population was comparable with the general population of pregnant women in the Netherlands, with the exception of the level of education and proportion of non-Dutch native women. The age and parity of the women in our study population were comparable to those of the general population of women who gave birth in the Netherlands in 2010 (mean age, 31.0 (SD 5.0), proportion nulliparous women, 48%).²¹ However, comparing our study population with the general population of women between 15 and 55 years of age in the Netherlands, more women were highly educated (45% versus 33%) and fewer women had a non-Dutch nationality (3% versus 25%).²² Therefore, our findings can most likely be generalised to high and middle-educated Dutch women in primary midwifery care. Because no questionnaire about support during labour was available, we first performed in-depth interviews and developed the questionnaire from the findings of these interviews. This procedure generated a high content validity of our questionnaire.

Despite the fact that we questioned women's preferences, it is known that some women only express a preference for what they think can be made available. Therefore, it could be possible that we did not capture all women's preferences regarding support types during and the first hours after childbirth.¹³

Conclusion and recommendations

Women prefer to receive more information about available types of support during childbirth, especially nulliparous women. They prefer to receive the most support from their partner and midwife. Only 10 % of the women specifically indicated to prefer continuous support. Based on this study, we consider the best approach to continuous support that it should be available on request rather than being not available or being the standard care. The availability of care is important. Then each woman can decide individually in pregnancy and during labour what is best for her. The challenge is providing continuous support by midwives because the caseload for midwives in the Netherlands is currently too high to provide continuous support for all women. A decrease of the caseload for the midwives in the Netherlands might be considered. There were differences in the preferences for support received from a maternity care assistant and a nurse between women with a planned home and a planned hospital birth. Our recommendation for the work field is to proactively discuss preferences for receiving support during and the first hours after childbirth with women and their partners. Furthermore, it is recommended to inform women and their partners about the positive effects support could have on their childbirth experience. This could be written down in a birth plan. Because of the lack of knowledge about the perspective of the partners and midwives on his/her role with regard to providing support during childbirth, we recommend future research to include an exploration of those perspectives. Moreover, we would like to reach non-Dutch and lower educated women to examine their perspective on the supportive activities to be received during and the first hours after childbirth and also compare and evaluate the needs for support before and after childbirth.

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CHAPTER 5

Experience with and amount of postpartum maternity care: Comparing women who rated the care they received from the maternity care assistant as 'good' or 'less than good care'

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ABSTRACT

Objective: The postpartum period is an important time in the lives of new mothers, their children and their families. The aim of postpartum care is ‘to detect health problems of mother and/or baby at an early stage, to encourage breastfeeding and to give families a good start’ (Wiegers, 2006).¹ The Netherlands maternity care system aims to enable every new family to receive postpartum care in their home by a maternity care assistant (MCA). In order to better understand this approach, in this study we focus on women who experienced the postpartum care by the MCA as ‘less than good’ care. Our research questions are; among postpartum women in the Netherlands, what is the uptake of MCA care and what factors are significantly associated with women’s rating of care provided by the MCA. **Design and setting** This study uses data from the ‘DELIVER study’, a dynamic cohort study, which was set up to investigate the organization, accessibility and quality of primary midwifery care in the Netherlands. **Participants** In the DELIVER population 95.6% of the women indicated that they had received postpartum maternity care by an MCA in their home. We included the responses of 3170 women.

Measurements and findings: To assess the factors that were significantly associated with reporting ‘less than good (postpartum) care’ by the MCA, a full cases backward logistic regression model was built using the multilevel approach in Generalized Linear Mixed Models.

Findings: The mean rating of the postpartum care by the MCA was 8.8 (on a scale from 1-10), and 444 women (14%) rated the postpartum maternity care by the MCA as ‘less than good care’. In the full cases multivariable analysis model odds of reporting ‘less than good care’ by the MCA were significantly higher for women who were younger (women 25–35 years had an OR 1.32, CI 0.96–1.81 and women < 25 years had an OR 1.90, CI 1.14–3.16) compared to women who were > 35 years, multiparous (OR 1.27, CI 1.01–1.60) and had a higher level of education (women with a middle level had an OR 1.84, CI 1.22–2.79 and women with a high level of education had an OR 2.11, CI 1.40–3.18) compared to women with a low level of education. With regards to the care odds of reporting ‘less than good care’ were higher for women who received the minimal amount of hours (OR 1.86, CI 1.45–2.38), in their opinion received not enough or too much hours maternity care assistance (OR 1.47, CI 1.01–2.15 and OR 5.15, CI 3.25–8.15 respectively), received care from more different MCAs (2 MCAs OR 1.61, CI 1.24–2.08), ≥3 MCAs OR 3.01, CI 1.98–4.56 compared to 1 MCA) and rated the care of the midwife as less than good care (OR 4.03, CI 3.10–5.25). The odds were lower for women whose reason for choosing maternity care assistance was to get information and advice (OR 0.52, CI 0.41–0.65).

Key conclusions: We conclude that (the postpartum) MCA care is well utilised, and highly rated by most women. Implications for practice: The approach to care in the Netherlands addresses the needs as outlined by NICE and WHO. Although no data exists around the impact of use on maternal infant outcomes, this approach might be useful in other jurisdictions. MCA care might be improved if the hours of MCA care were tailored, and care by multiple MCAs minimised.

Keywords: midwifery; patient satisfaction; postpartum period

INTRODUCTION

The postpartum period is an important time in the lives of new mothers, their children and their families. It is a time of changes, transitions and emotions.² The aim of postpartum care is 'to detect health problems of mother and/or baby at an early stage to encourage breastfeeding and to give families a good start'.¹ Internationally, women's evaluation of postpartum care has consistently been more negative than their rating of other episodes of maternity care. Despite such evaluations postpartum care is often given low priority in research and practice.³⁻⁴ From the perspective of both postnatal women and care providers increasing concern has been expressed regarding postnatal care provision while at the same time there has been a lack of evidence to guide developments in postpartum care.³⁻⁵ The importance of professional postpartum care is described in the World Health Organisation and United Nations Children's Fund (WHO/UNICEF) standard as well as in the National Institute for Health and Care Excellence (NICE) guideline and the NICE quality standard.⁶⁻⁷ In their joint statement WHO/UNICEF recommend home visits by qualified care providers in the baby's first week of life based on studies showing that home-based new born care interventions can prevent 30–60% of new born deaths in high mortality settings under controlled conditions. The NICE guideline is one of the few guidelines that covers routine postpartum care for the mother and infant.⁸ In high-income countries some studies have shown postpartum home visits to be effective in improving breastfeeding rates and parenting skills.^{2,9} A Cochrane review (2013) concluded that, although postpartum home visits may promote infant health and maternal satisfaction, the evidence was inconsistent and that the frequency, timing, duration and intensity of postpartum care visits should be based upon local needs.¹⁰ The care provided in the postpartum period differs across jurisdictions and maternity care models, in terms of duration of postpartum hospital stay, frequency and number of home visits as well as care provider qualification.¹¹⁻¹² The Netherlands' maternity care system aims to enable every new family to receive postpartum care in their home.¹³ In the Netherlands 13% of the women give birth at home and 87% in hospital or a birth centre following which they will usually return home within a few hours.¹⁴ At home the new family receives care from a team of a midwife and maternity care assistant (MCA). A primary care midwife will visit the family 3–5 times (or more when necessary) in the first 8–10 days after birth. The MCA provides care (3–8 hours per day) up to 8 to 10 days after birth.¹ Every year nearly 170,000 women give birth in the Netherlands and an estimated 90% of those families receive postpartum maternity care assistance in their home. The MCAs also assist midwives during births at home, and increasingly in hospital and birth centres. The MCA provides the mother, her partner and child with practical care, support, instruction and guidance during and after childbirth.^{1,15} The MCA has a role in assessing and screening for complications and when a complication occurs or threatens to occur, will contact the midwife who will assess the woman and/or child and make appropriate referrals to secondary care for a consultation or admission to hospital.^{1,15} "An MCA, unlike a midwife, will be with the family for an extended period.

The advantage of this is that information and education is embedded in the daily activities and therefore more easily understood and accepted, health care and psycho-social care are indissolubly intertwined. The timely detection of symptoms that may lead to health problems later will help reduce readmissions rates and thereby reduce costs.¹ Another advantage is that with the help of a MCA mothers may have more opportunity to will rest thus ameliorating tiredness and fatigue, which are described as the most common problem affecting new mothers.¹⁶⁻¹⁷ A possible disadvantage is that it increases health care costs. However, the availability of maternity care assistance makes home birth and early discharge after hospital birth possible, thereby reducing health care costs. In the Netherlands the care in the postpartum period is substantially less studied compared to the care in the prenatal and intrapartum period with little research related to women's ratings of the care by MCAs. The approach to care in the Netherlands appears to address the needs as outlined by NICE and WHO, however before other health care systems could consider using an approach that would include an MCA, it is useful to evaluate more carefully the organization of and experience with postpartum care, including the care provided by the maternity care assistants, in the Netherlands. In this study, we focus on women who experienced the postpartum care by the MCA as 'less than good' care.

The purpose of this study was twofold: first, we were interested in getting a better understanding of the uptake of maternity care assistance during the postpartum period in the Netherlands; and second, we investigated which factors affected the women's rating of postpartum maternity care by the MCA. Our research questions were: (1) among postpartum women in the Netherlands what is the uptake of MCA care and (2) what factors are significantly associated with women's ratings of care provided by the MCA? To address the latter, we compared women who rated care they received by the MCA as 'good' and 'less than good care'.

Textbox Postpartum care by Maternity Care Assistants (MCAs) in The Netherlands

1. MCA education: 3 year senior secondary vocational education (without experience or previous relevant education)
2. In general, women sign up for MCA at the end of the first trimester of their pregnancy.
3. Every person in the Netherlands is statutorily insured for healthcare costs and MCA is included in the basic health care package that is available for everyone.
4. A co-payment of 4.15 euro per hour is required (in 2016) for postpartum maternity care assistance, for which people can take out an additional insurance.
5. The standard for postpartum maternity care assistance is 49 hours in 8 consecutive days, beginning at the day of birth. The legally defined minimum is 24 hours in up to 8 days and the maximum is 80 hours, in a period of 10 days.
6. Because MCA is care to be provided at home (or in a home-like environment), for each day spent in hospital after giving birth one eighth is deducted from the agreed upon number of hours, based on the notion that during their hospital stay they also receive postpartum care, not from an MCA, but from an obstetrical nurse. This was meant to encourage women with an uncomplicated birth to return home as soon as possible, thereby reducing the health care costs.
7. The average duration of postpartum care by MCAs in our study was 38.5 hours in 2010, depending on the mother's wishes, the availability of MCAs and the duration of the hospital stay after childbirth.

METHODS

This study is part of the DELIVER study (DELIVER stands for Data Eerste Lijns VERloskunde, data on primary midwifery care), which is a large prospective cohort study in the Netherlands set up to investigate the organization, accessibility and quality of primary midwifery care. Data were collected from clients and their partners, midwives and other healthcare professionals across the Netherlands, between September 2009 and April 2011. Clients from twenty midwifery practices assessed their expectations and experiences. These client data were linked to data from electronic client records kept by midwives and collected by the Netherlands Perinatal Register. Methodological details of this study have been published previously. The Medical Ethics Committee of VU University Medical Centre, Amsterdam approved the study protocol of the DELIVER study.

Recruitment

Clients were recruited from 20 midwifery practices. Purposive sampling was used to select practices, using three stratification criteria: region, level of urbanization and practice type (dual or group practice). The 20 participating practices included 108 midwives and about 8200 clients per year. The primary aim of the client questionnaires was to develop a profile of a pregnant woman in the Netherlands, her background, her health, her lifestyle, her work, her use of healthcare in general and in addition to that to assess her expectations and experiences with and her rating of the maternity care. Clients were eligible to participate if they were able to understand Dutch, English, Turkish or Arabic. Midwives provided the usual care to all their clients irrespective of their participation, but they were required to inform all eligible clients individually about the study and invite them to participate. To improve the overall response, a reminder was sent to all non-responders.¹⁸

Participants

Participants of our study were low-risk women (women with uncomplicated pregnancies) within the DELIVER study population in the Netherlands. Depending on their gestational age at inclusion, women may have completed up to three questionnaires at different time points: an early prenatal questionnaire was completed before 35 weeks (on average around 20 weeks gestation), a late prenatal questionnaire between 35 weeks and birth and a postpartum questionnaire at about 6 weeks postpartum. Data from the different questionnaires were linked at the personal level. Each of the three questionnaires consisted of 70–90 questions.¹⁸ Women were included in this sub study when they completed the postpartum questionnaire of the DELIVER study, and indicated that they had received postpartum maternity care assistance (see Fig. 1). The DELIVER client data were linked to midwife-led care data from the Netherlands Perinatal Register (PRN, “Landelijke Verloskundige Registratie”, LVR1). Linkage was successful

for 3432 (89%) of the women included in our study. Women with and without linked data were similar with regard to maternal age, nationality, education level and socioeconomic status.

Outcome measures

To assess the care provided by the maternity care assistant women were asked the following question: “Please rate your overall feelings about the care provided by your maternity care assistant in the days following the birth of your child on a scale from 1 to 10, with 1 indicating the worst possible care and 10 indicating the best possible care.”

We dichotomized the outcome variable into “less than good” care (rating 1–7) and “good to best possible” care (rating 8–10). This division is based on the Dutch school system, where an eight or more has the meaning of a good to best possible performance and a 7 or less for a moderate to worst possible performance.¹⁹

Independent measures

The rating of the quality (‘good’ or ‘less than good care’) and experience with the quantity (number of hours of care) was studied and we analysed which of the variables were significantly associated with “less than good” care by the MCA. From the background characteristics (Table 1) the following characteristics were used; age (mean and in categories; < 25, 25–35 and > 35 years old), parity (primi-and multiparae), having a partner (yes/no), nationality (Native Dutch/ Western non-Dutch/ Non Western), educational level (low, middle, high educational level), social economic status (SES, 1,2,3 1 is low and 3 is high), perceived influence on own health (yes/no), depression symptoms (yes or somewhat / no) and insurance coverage (basic/ basic plus supplementary package). In addition to the socio-demographic information, data about the preparation for the intra- and postpartum maternity care by the MCA was described (Table 2). The following data were obtained from the late prenatal questionnaire: planned place of birth (at home/hospital/birth centre), intake with the MCA organisation (yes by phone or at home/not yet/no), agreed number of hours maternity care assistance, plans to breastfeed (yes/no) and plans to have an MCA present at birth.

Furthermore the actual received postpartum care was obtained from the postpartum questionnaire: was the MCA present at birth (yes/ no), when did the MCA arrive (well before birth/shortly before or during birth/after birth), how long was the MCA present during the birth (< 1 hour, between 1 and 2 hour or > 2 hour), did the MCA remain with the woman that day (yes/no she left after birth/I don’t know), the reason for choosing postpartum maternity care assistance (help during birth/physical help postpartum/information and advice/ practical help at home /other), number of days of maternity care assistance (< 6/ 6/ 7/ 8/ > 8 days), total hours maternity care assistance, did the woman receive the number of hours as agreed in pregnancy (yes/no, fewer hours/no, more hours/I don’t know), what was the reason for not getting the hours as agreed (hospital stay after birth/twins/health issues (baby or mother)/ feeding problems/ co-payment to high/ requested a change in hours/the organisation did

not have sufficient staff/other), opinion about number of hours (not enough/barely enough/enough/too many hours), provided the same MCA the care during the total period (yes/yes, but only a different MCA at childbirth/no, after a few days came a different MCA/no, there were 3 or more MCA's), patient centeredness score of the MCA (median and mean), did the woman breastfeed her child (yes/partly/no/ not anymore, but I did the first days or weeks), rating of the postpartum care of the midwife and of the MCA (rating 1–7 /8–10) and did the woman have a follow up examination (yes with midwife or gynaecologist/ I made an appointment/no). These determinants were all categorical variables except for patient centeredness scale (see Tables 1 and 2). The experienced patient-centeredness of the MCA was measured using a patient-centeredness scale in which the questions are based on quality indicators about treatment by a particular caregiver at a particular time (for example: Did your MCA listen to you carefully? Did your MCA take you seriously?). The patient centeredness scale contains 7 items measuring frequency on a four-point scale ('never'(1), 'sometimes'(2), 'usually'(3) and 'always'(4)), and has an internal consistency coefficient of 0.9. The patient-centeredness scale was analysed using the mean score (sum score divided by 7, yielding a continuous variable with a score ranging between 1.0 - 4.0).²⁰

Analyses

First we described the background and care-specific characteristics in the study. To assess the factors that were significantly associated with the rating of the experienced maternity care assistance, first a full cases univariate analysis was performed. Thereafter a backward logistic regression model was built using the factors shown to be significant in the univariable analyses and variables that by means of reasoning could be associated with the rating of the MCA care. In steps, the variables with the highest p-values were removed from the model, then the changes in the odds ratios and p-values were studied. In the final model only variables with p-values of 0.05 and below were maintained (Table 3). Because the data consisted of two levels of data, the respondents and the midwifery practices, we used the multilevel approach in Generalized Linear Mixed Models, IBM SPSS Statistics, version 21, Chicago, IL.

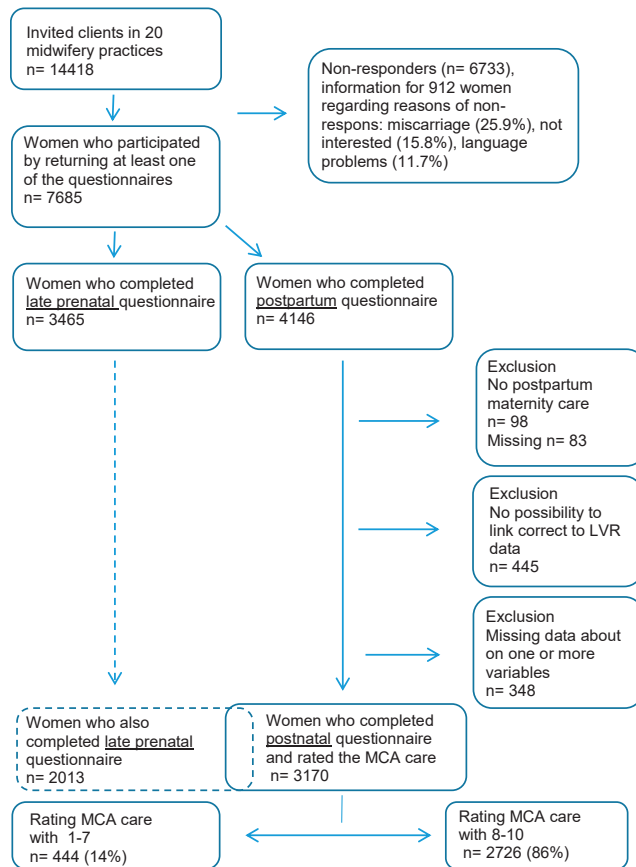


Figure 1. Flowchart: Number (n) of participants of the 'DELIVER' study who were included in our study.

FINDINGS

Participants

Of all 14418 eligible clients of the participating midwifery practices, 7685 women participated by returning at least one questionnaire (response rate 53%). About a quarter of these women ($n = 1800$) completed all three questionnaires during the one-year study period. From the 4146 women who completed the postpartum questionnaire, 95.6% indicated that they had received postpartum maternity care by an MCA in their home (Fig. 1). Following our other exclusion criteria for this (sub) study, 3170 women remained. Of those 3170 women, 2013 also responded to the late prenatal questionnaire and gave answers about the preparation for the postpartum period (Fig. 1). The mean age of our study sample was 31.0 years (SD 4.5), 46.1% of the women were primipara and 53.9% multipara (Table 1). The large majority of the women was native

Dutch (96%), had a middle or high level of education (53.1% high level, 34.8% middle level) and had a spontaneous vaginal birth (82.1%).

Table 1. Background characteristics participants 'Deliver' study, who responded to the postpartum questionnaire and had rated MCA postpartum care. Data collected between September 2009 and April 2011 in the Netherlands. (n= 3170= full cases)

	Total N=3170	Rating MCA care 1-7 N=444 (14%)	Rating MCA care 8-10 N=2726(86%)
Age *			
Mean (SD)	31.0 (4.5)	30.8 (4.5)	31.0 (4.5)
(Min-max)	(17-46)	(19-43)	(17-46)
Parity *			
Primiparae	1461(46.1)	197(44.4)	1264(46.4)
Multiparae	1709(53.9)	247(55.6)	1462(53.6)
Partner			
Yes	3129(98.7)	438(98.6)	2691 (98.7)
No	41 (1.3)	6(1.4)	35(1.3)
Nationality			
Native Dutch	3042 (96.0)	418 (94.1)	2624(96.3)
Western non-Dutch	66 (2.1)	12(2.7)	54(2.0)
Non Western	62 (2.0)	14(3.2)	48(1.8)
Educational level Δ *			
Low	385(12.1)	38(8.6)	347(12.7)
Middle	1103(34.8)	154(34.7)	949(34.8)
High	1682(53.1)	252(56.8)	1430(52.5)
Socio Economic Status			
1 High	836 (26.4)	121(27.2)	715(26.2)
2	1498(47.3)	184(41.1)	1314(48.2)
3 Low	836(26.4)	139(31.3)	697(25.6)
Influence own health			
Yes	2758(87.0)	381(85.8)	2377(87.2)
No	412(13.0)	63(14.2)	349(12.8)
Anxious/depressed 6 weeks pp *	512(16.2)	92(20.7)	420(15.4)
Yes/Somewhat	2658(83.8)	352(79.3)	2306(84.6)
No			
Health insurance			
Basic health insurance package	381(12.0)	60 (13.5)	321(11.8)
Basic package plus supplementary	2789(88.0)	384 (86.5)	2405(88.2)
Mode of birth			
Spontaneous birth	2604(82.1)	359(80.9)	2245(82.4)
Instrumental birth	333(10.5)	47(10.6)	286(10.5)
Caesarean	233(7.4)	38(8.6)	195(7.2)
Rating midwifery intrapartum care			
Mean score (SD)	8.8(1.3)	8.4(1.5)	8.9(1.2)
Missing	42	4	38

Δ Educational level: Low= primary school/ preparatory secondary vocational education/general secondary education Mid-
dle= senior secondary vocational education/ senior general secondary education/ pre-university education High = bachelor,
master degree or post-graduate degree

*significant, $p \leq 0.05$

Table 2. Client related characteristic of participants who responded to late prenatal and postpartum questionnaire and had rated MCA postpartum care. Preparation in pregnancy for, and women's rating of, intrapartum and postpartum maternity care assistance by MCA's.

	Total	Rating MCA care 1-7	Rating MCA care 8-10
Planning /preparations prenatal	N=2013 (%)	N=283 (14%)	N=1730 (86%)
Planned place of birth			
At home	948 (48.1)	134(48.0)	841(48.1)
Hospital (own midwife)	655(33.2)	91(32.6)	564(33.4)
Hospital (unknown care provider)	287(14.6)	45(16.1)	242(14.3)
At a birth centre	6(0.3)	1(0.4)	5(0.3)
Other..	39(2.0)	3(1.1)	36(2.1)
I don't know	35(1.8)	5(1.8)	30(1.8)
Missing	43	4	39
Intake MCA⁺ organisation			
Yes, by phone	746(38.3)	117(42.5)	629(37.6)
Yes, at home	1171(60.2)	154(56.0)	1017(60.9)
Not yet	24(1.2)	3(1.1)	21(1.3)
No	5(0.3)	1(0.4)	4(0.2)
Missing	67	8	59
Agreed hours (total over eight days)			
Mean (SD)	49 (9.6)	49(12.7)	49(9.08)
Planning to breastfeed			
Yes	1662(84.3)	243(87.1)	1419(83.9)
No	267(13.5)	29(10.4)	238(14.1)
I don't know	42(2.1)	7(2.5)	35(2.1)
Missing	42	4	38
Planning that MCA present at birth			
Yes	1124(58.6)	151(55.7)	973(59.1)
No	793(41.4)	120(44.3)	673(40.9)
Missing	96	12	84
Rating prenatal care midwife			
Mean score (SD)	8.4(0.9)	8.2(0.9)	8.5(0.9)
Intra and postpartum care	N=3170 (%)	N=444 (14%)	N=2726 (86%)
Was MCA present at birth*			
Yes	942(29.7)	115(25.9)	827(30.3)
No	2228(70.3)	329(74.1)	1899(69.7)
When did MCA arrive (n=939)			
Well before birth	470 (50.1)	46 (40.7)	424(51.3)
Shortly before or during birth	399 (42.5)	57 (50.4)	342 (41.4)
After the birth	70(7.5)	10 (8.8)	60(7.3)
Missing	3	2	1

Table 2. Client related characteristic of participants who responded to late prenatal and postpartum questionnaire and had rated MCA postpartum care. Preparation in pregnancy for, and women's rating of, intrapartum and postpartum maternity care assistance by MCA's. (*continued*)

	Total	Rating MCA care 1-7	Rating MCA care 8-10
How long was MCA present at birth (n=942)			
<1 hour	305(32.6)	32 (27.8)	273(33.3)
Between 1 and 2 hours	240(25.6)	38 (33.0)	202(24.6)
>2 Hours	391(41.8)	45 (39.1)	346 (42.1)
Missing	6	0	6
Did MCA remain with you after birth (n=967)			
Yes	559(59.8)	55(47.85)	504(61.5)
No, she left	356(38.1)	55(48.85)	301(36.7)
I don't know	20(2.1)	5(4.3)	15 (1.8)
Missing	6	0	6
Reason for choosing in home MCA *			
1.Help during the birth process	852 (26.9)	93(20.9)	759(27.8)
2.Physical help postpartum	3078 (97.1)	414(93.2)	2664(97.7)
3.Information and advice postpartum	2150 (67.8)	224(50.5)	1926(70.7)
4.Practical help at home postpartum	2911 (91.8)	374(84.2)	2537(93.1)
5.Other	75 (2.4)	14(3.2)	61(2.2)
Days MCA			
< 6 days	414(13.1)	84(18.9)	330(12.1)
6	377(8.7)	50(11.3)	227(8.3)
7	1000(31.5)	124(27.9)	876(32.1)
8	1124(35.5)	142(32.0)	982(36.0)
>8	355(11.2)	44(9.9)	311(11.4)
Total Hours MCA *			
Mean (SD)	38.5 (14.2)	33.7 (15.2)	39.3(13.8)
median	42.0	36.0	42.0
Hours MCA as agreed *			
Yes	1952(61.6)	240(54.1)	1712(62.8)
Fewer hours	501(15.8)	110(24.8)	391(14.3)
More hours	682(21.5)	84(18.9)	598(21.9)
I don't know	35(1.1)	10(2.3)	25(0.9)
What is the reason you did not get hours as agreed (n=1181)			
Hospital stay after birth	478(40.5)	74(38.3)	404(40.9)
Twins	6(0.5)	0(0.0)	6(0.6)
Health issues (baby)	132(11.2)	28(14.5)	104(10.5)
Health issues (mother)	366(31.0)	53(27.5)	313(31.7)
Feeding problems	282(23.9)	28(14.5)	254(25.7)
Co-payment too high	3(0.3)	1(0.5)	2(0.2)
Requested a change in hours	145(12.3)	36(18.7)	109(11.0)
Not have sufficient staff	89(7.5)	22(11.4)	67(6.8)
Other	221(18.7)	40(20.7)	181(18.3)
Opinion about number of hours *			
Not enough hours received	225(7.1)	48(10.8)	177(6.5)
Barely enough hours	924(29.1)	120(27.0)	804(29.5)
Enough hours	1924(60.7)	229(51.6)	1695(62.2)
Too many hours	97(3.1)	47(10.6)	50(1.8)

Table 2. Client related characteristic of participants who responded to late prenatal and postpartum questionnaire and had rated MCA postpartum care. Preparation in pregnancy for, and women's rating of, intrapartum and postpartum maternity care assistance by MCA's. (*continued*)

	Total	Rating MCA care 1-7	Rating MCA care 8-10
Same MCA *			
Yes	2044(64.5)	237(53.4)	1807(66.3)
Yes, only different MCA at childbirth	294(9.3)	35(7.9)	259(9.5)
No, after a few days different MCA	693(21.9)	124(27.9)	569(20.9)
No, 3 or more MCAs	139(4.4)	48(10.8)	91(3.3)
Patient Centeredness MCA *			
Median (min-max)	4.0 (1.4-4.0)	3.3 (1.4-4.0)	4.0(2.4-4.0)
Mean (SD)	3.8 (0.36)	3.2 (0.5)	3.9 (0.2)
Missing	19	8	11
Breastfeeding at this moment			
Yes	1718(54.2)	247(55.6)	1471(54.0)
Partly	275(8.7)	42(9.5)	233(8.5)
No	524(16.5)	60(13.5)	464(17.0)
Not anymore, but I did the first days/ weeks	653(20.6)	95(21.4)	558(20.5)
Rating postpartum care midwife *			
1-7	418(12.2)	131(29.5)	246(9.0)
8-10	3014(87.8)	313(70.5)	2480(91.0)
Mean score(SD)	8.8(1.3)	8.4(1.5)	8.9(1.2)
Follow up examination with your midwife or gynaecologist?			
Yes, with my midwife	908(28.7)	131(29.5)	777(28.5)
Yes, with my gynaecologist	310(9.8)	53(11.9)	257(9.4)
I made an appointment	1090(34.4)	137(30.9)	953(35.0)
No	860(27.1)	123(27.7)	737(27.1)
Missing	2	0	2

†MCA= Maternity Care Assistant

*significant, $p \leq 0.05$

Analyses

Of the 3170 women, 444 women (14%) rated the postpartum maternity care by the MCA as 'less than good care'. The mean rating of the received postpartum care by the MCA (and the care by the midwife also) was 8.8 (on a scale from 1 to 10, with 1 indicating the worst possible care and 10 indicating the best possible care). With regards to the prenatal preparation and/or planning (see Table 2), 98.5% of the women had prenatal intake (visit or phone call) with the MCA organisation to discuss the postpartum care and 59% of the women planned for an MCA to be present at birth. Of the women who did not plan for the MCA to be present at birth, 87.8% planned to give birth in hospital.

Table 3. Client related factors associated with a ‘less than good’ rating of care by the MCA postpartum. Fixed effects, multivariable logistic regression analysis using generalized estimation equations (GEE), forward procedure, full cases analysis.

Determinant	Crude OR (95% CI)		p	Adjusted OR (95%CI)		p
	Ref.† Rating MCA care with 1-7			Ref.† rating MCA care with 1-7		
Age						
<25	1.73	(1.11-2.70)	.015	1.90	(1.14-3.16)	.014
25-35	1.22	(0.91-1.60)	.060	1.32	(0.96-1.82)	.096
Ref. >35						
Parity						
Multiparae	1.12	(0.91-1.37)	.283	1.27	(1.01-1.60)	.045
Ref. Primiparae						
Partner						
No	0.94	(0.39-2.26)	.888			
Ref. Yes						
Nationality						
Non Western	1.38	(0.74-2.59)	.310			
Western non-Dutch	1.28	(0.68-2.43)	.445			
Ref. Native Dutch						
Educational level						
High	1.58	(1.09- 2.27)	.015	2.11	(1.40-3.18)	<.001
Middle	1.54	(1.05-2.25)	.026	1.84	(1.22-2.79)	.004
Ref. Low						
SES						
3	1.14	(0.84-1.55)	.404			
2	0.87	(0.66-1.13)	.290			
Ref 1			.			
Depression symptoms						
Yes/Somewhat	1.41	(1.09-1.81)	.008			
Ref. No						
Mode of Birth						
Sc	1.19	(0.82-1.72)	.361			
Instrumental birth	1.02	(0.73-1.42)	.912			
Ref. Spontaneous birth						
MCA present at birth						
No	1.20	(0.95-1.51)	.119			
Ref. Yes						
Reason MCA (more answer options possible)						
1.Help during the birth process	0.72	(0.56-0.92)	.010			
2.Physical help postpartum	0.34	(0.21-0.53)	<.001			
3.Information and advice postpartum	0.43	(0.35-0.52)	<.001	0.52	(0.41-0.65)	<.001
4.Practical help at home postpartum	0.43	(0.32-0.59)	<.001			
5.Other	1.46	(0.81-2.65)	.209			
Days postpartum maternity care by MCA						
<6	1.66	(1.22-2.24)	.001			
6	1.52	(1.06-2.17)	.022			
7	0.96	(0.74-1.25)	.772			
>8	0.97	(0.68-1.40)	.877			
Ref. 8 days						

Table 3. Client related factors associated with a 'less than good' rating of care by the MCA postpartum. Fixed effects, multivariable logistic regression analysis using generalized estimation equations (GEE), forward procedure, full cases analysis. (*continued*)

Determinant	Crude OR (95% CI)		p	Adjusted OR (95%CI)		p
	Ref.† Rating MCA care with 1-7			Ref.† rating MCA care with 1-7		
Total Hours MCA						
Minimal amount=3 hr/day	2.57	(2.06-3.20)	<.001	1.86	(1.45-2.38)	<.001
Ref. Standard amount 6hr/day						
Hours MCA as agreed						
More hours	1.00	(0.76-1.30)	.987	1.12	(0.84-1.49)	.452
Fewer hours	1.89	(1.46-2.43)	<.001	1.49	(1.12-1.98)	.006
I don't know	2.87	(1.35-6.08)	.006	2.21	(0.96-5.08)	.062
<i>Ref. Yes</i>						
Opinion about hours MCA						
Too many hours	6.57	(4.29-10.06)	<.001	5.15	(3.25-8.25)	<.001
Barely enough	1.11	(0.88-1.41)	.388	1.04	(0.81-1.34)	.746
Not enough	1.98	(1.40-2.81)	<.001	1.47	(1.01-2.15)	.047
<i>Ref. Enough</i>						
Same MCA						
No, 3 or more	3.77	(2.58-5.51)	<.001	3.01	(1.98-4.56)	<.001
No, after few days different	1.58	(1.24-2.01)	<.001	1.61	(1.24-2.08)	<.001
Yes, only different than childbirth	1.00	(0.68-1.46)	.995	1.23	(0.83-1.84)	.303
<i>Ref. Yes</i>						
Breastfeeding						
No	0.81	(0.60-1.10)	.174			
No, but made a start	1.06	(0.82-1.37)	.679			
Partly	1.05	(0.73-1.50)	.797			
<i>Ref. Yes</i>						
Rating postpartum care midwife						
1-7	4.27	(3.33-5.46)	<.001	4.03	(3.10-5.25)	<.001
<i>Ref. 8-10</i>						
Patient Centeredness MCA						
<i>Composite score</i>	0.01	(0.01-0.02)	<.001			

† Reference category

*MCA= Maternity care assistant

Multivariable analyses

The 'patient centeredness of the MCA' was excluded from the multivariable model due to a very high correlation with the rating of the postpartum care by the MCA. There was no collinearity between the measures. The full cases multivariable analysis showed the same determinants to be significant as in the univariable analyses with the exception that the adjusted OR was not significant for depression symptoms and whether the MCA was present at birth or not. In the full cases multivariable analysis model odds of reporting 'less than good care' by the MCA were significantly higher for women who were younger (women 25–35 years had an OR 1.32, CI 0.96–1.81 and women < 25 years had an OR 1.90, CI 1.14–3.16) compared to women who were

> 35 years), multiparous (OR 1.27, CI 1.01–1.60) and had a higher level of education (women with a middle level had an OR 1.84, CI 1.22–2.79 and women with a high level of education had an OR 2.11, CI 1.40–3.18 compared to women with a low level of education). With regards to the care odds of reporting ‘less than good care’ were higher for women who received the minimal amount of hours (OR 1.86, CI 1.45–2.38), in their opinion received not enough or too much hours maternity care assistance (OR 1.47, CI 1.01–2.15 and OR 5.15, CI 3.25–8.15 respectively), received care from more different MCAs (2 MCAs OR 1.61, CI 1.24–2.08), ≥ 3 MCAs OR 3.01, CI 1.98–4.56 compared to 1 MCA) and rated the care of the midwife as less than good care (OR 4.03, CI 3.10–5.25). The odds were lower for women whose reason for choosing maternity care assistance was to get information and advice (OR 0.52, CI 0.41–0.65).

DISCUSSION

The maternity care system in the Netherlands aims to enable every new family to receive postpartum care in their home.¹³ In our study sample, 95.6% of the women indicated that they had received postpartum maternity care by an MCA in their home. Concerning the prenatal preparation for and planning of the postnatal period, 98.5% of the women had a prenatal intake (visit or phone call) with the MCA organisation to discuss the postpartum care and 59% of the women planned for an MCA to be present at birth. From the women who did not plan for the MCA to be present at birth, 87.8% planned to give birth in hospital. It is likely that women who planned their birth in hospital assumed that, instead of the MCA, a nurse would be present, which is common in the Netherlands.

The postpartum care by the MCA was rated with a mean rating of 8.8 (on a scale from 1 to 10, with 1 indicating the worst possible care and 10 indicating the best possible care), equal to the rating of intrapartum and postpartum midwifery care (both 8.8) and higher than the rating of prenatal midwifery care (8.4). So it can be concluded that overall women rated the postpartum care by the MCA as ‘good to best possible’ care. This high rating of the postpartum care in the Netherlands is not congruent with the international literature, where postpartum care is generally given a lower rating than other episodes of maternity care.^{3, 21-24} Despite this overall high rating 444 (14%) of women rated their postpartum care by the MCA as ‘less than good care’ (with a score of 7 or less). One of our first observations was that the patient-centeredness of the MCA, as reported by women, almost fully explained the rating of postpartum care by MCAs. Patient centeredness of the care provider seems to be a key factor in explaining the rating of the care. Other studies regarding health care providers report similar results.^{21, 24-26} A recent study from Todd et al. (2017) demonstrated that “women who were ‘always or almost always’ treated with kindness and understanding were 1.8–2.8 times more likely to rate their antenatal, birth and postnatal care as ‘very good’ care”.²⁴ Regarding the characteristics of women, the odds of rating the postpartum MCA care as ‘less than good’ care were higher for women who

were younger; were multiparous and had a higher level of education. Women who gave lower ratings for the postpartum MCA care also rated the care of the midwife as less than good care; and women gave higher ratings for the MCA care if they indicated that their reason to choose maternity care assistance was to get information and advice. Furthermore, with regard to the received care the odds of rating the postpartum MCA care as 'less than good' care were higher for women who: received the minimum amount of hours; in their opinion, received either not enough or too many hours maternity care assistance; received care from more different MCAs (less continuity). These data suggest that continuity of MCA provider and adequate hours of care are important factors associated with evaluating care highly. However, it is possible that women who were displeased with their MCA requested a change of care provider, contributing to lack of continuity. Similarly, women who were displeased with their MCA care may have requested that the hours be reduced. Thus while we observe an association, direction and causality cannot be presumed. There are women who assessed the postpartum care by the MCA as too much care and there are women who assess the care as not enough care. A recommendation would be that the hours of care by the MCA could be more tailored. For example, currently days in the hospital are being deducted from the hours of maternity care assistance available postpartum. Women with a lengthier postpartum hospital stay for caesarean section or other complication of birth are likely to be less mobile and more in need of care than, for example, multipara who had an uncomplicated (home) birth, yet they will receive fewer hours of MCA care at home. Women who rated the care by the MCA as less than good care have higher odds to rate the care by the midwife as less than good care. We have no explanation for this based on our data. There could be a bias dependent on experience in the sense that the overall evaluation of the birth experience affects how women remember all the care they received.

The sample was generally representative of the Dutch population except with regard to the percentage of women with non-Dutch nationality (Perinatal Registration Netherlands, data 2010: primip, 47.5%, multip 52.5%. 21.3% non-Dutch, mean age 31.0 (SD 5.0)).²⁷ More than 90% of Dutch women and about 85% of non-Dutch women receive maternity care assistance. Women of foreign origin may make less use of maternity care assistance than Dutch women because they are less familiar with the service, have not been informed properly or expect help from their own family.¹

Although Non Dutch women apply less frequently for maternity care assistance because of cultural reasons, this is not the reason of the low number of non-Dutch women in our sub study. The reason is that the main Deliver study had difficulty reaching these women. Overall only 5% non-Dutch women responded to the postpartum questionnaire. The mode of birth was not generally representative to the childbearing population in the Netherlands, but that was to be expected because this study was among women who started their care in primary care (low risk population). In our group there was a larger proportion of women with a spontaneous vaginal birth. Our recommendation for future research is to investigate the experience with

postpartum maternity care by MCAs among women who started their prenatal/ natal care in secondary/ tertiary care as well. A recommendation for practice is that the MCA organizations provide a clear explanation about the main tasks of the MCA and include a discussion about the expectations of the family at intake. This will assist the woman and her partner in realizing that one of the most important tasks of the MCA is to provide information and advice (and not to clean the house, for example) and in this way the postpartum care by the MCA will even better fulfil the families' expectations.

One of the strengths of our study was that we were able to collect data about a large group of women (N = 3170) who started their pregnancy in primary care. A weakness of our study was the low percentage of women from other nationalities.

We conclude that MCA care is well utilized and highly rated by most women. Furthermore, the approach to care in the Netherlands addresses the needs as outlined by NICE and WHO. Although no data exist around the impact of use on maternal infant outcomes, this approach might be useful in other jurisdictions.

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CHAPTER 6

Women's suggestions for improving midwifery care in the Netherlands.

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ABSTRACT

Background: The experience of the care a woman receives during pregnancy and childbirth has an immediate and long-lasting effect on her well-being. The involvement of patients and clients in health care has increased over the last decades. The Dutch maternity care system offers an excellent opportunity to explore and involve women's suggestions for the improvement of midwifery care in the current maternity care model.

Methods: This qualitative study is part of the "DELIVER" study. Clients were recruited from 20 midwifery practices. Purposive sampling was used to select the practices. The clients received up to three questionnaires, in which they could respond to the question; "Do you have any suggestions on how your midwife could improve his/her provision of care?" The answers were analysed with a qualitative thematic content analysis, using the software program MAXQDA.

Results: Altogether, 3499 answers were provided. One overarching concept emerged: clients' desire for individualized care. Within this concept, suggestions could be clustered around 1) provider characteristics: interpersonal skills, communication, and competence, and 2) service characteristics: content and quantity of care, guidance and support, continuity of care provider, continuity of care, information, and coordination of care.

Conclusions: Informed by the suggestions of women, care to women and their families could be improved by the following: 1) more continuity of the care provider during the prenatal, natal, and postnatal periods, 2) more information and information specifically tailored for the person, 3) client-centred communication, and 4) a personal approach with 5) enough time spent per client.

Key words: midwifery care, women-centred care, women's experiences

BACKGROUND

The experience with the care received during pregnancy and childbirth has an immediate and long-lasting effect on a woman's well-being and her relationship with her child.¹ There are various factors which can affect women's experience with maternity care, including women's characteristics (age, parity, socio-economic status, etc.), factors relating to the childbirth process (complications, length of birth, etc.), the model of maternity care, and aspects within the model of care, including continuity of care and caregiver, patient centeredness, the quality of relationship with the caregiver, type of caregiver, personal treatment (affection and communication aspects), being in control, fulfilment of expectations and preferences, quantity of prenatal visits, use of interventions, pain medication, and information provision.²⁻²¹ Research on the experiences with care can be challenging.^{2,4,11-12,20} In general, there is a lack of variation in results; typically at least 80 percent of respondents express satisfaction for any given question.²¹ Furthermore, clients are often reluctant to criticize caregivers.²¹ This reluctance has been explained by patients' gratitude, loyalty, and confidence in the health care system. Nevertheless, when either more specific questions or more open-ended questions are asked, dissatisfaction with care can be solicited.^{4,21}

The basic assumption, in the Netherlands' maternity care model, is that a healthy woman with an uncomplicated pregnancy has no need to see another care provider apart from her midwife. However, when complications occur, or threaten to occur, she will receive secondary care from an obstetrician.²⁰ This maternity care model is described as a shared care model of care, even though 27.4 percent of all women receive care from a midwife only, during the prenatal, natal, and postnatal period, so their care is entirely midwife led.²² In addition, there are also women whose care is referred to the obstetrician in the hospital (secondary care) during childbirth, but whose midwife remains present throughout the birth and provides postpartum care.

The perinatal mortality rates in the Netherlands were reported as relatively unfavourable compared with other European countries, contributing to a debate about the Dutch health care system.²³⁻²⁶ In recent years, there has been a lot of discussion between professionals and in the general media about changing the system into a more integrated form of care, with fewer barriers for cooperation between primary and secondary care.^{23,26} In 2009, the Dutch Minister of Health instructed a steering group (Steering Group Pregnancy and Childbirth), to write a report with recommendations to improve the maternity care organization and reduce perinatal mortality in the Netherlands. In their recent report, one of the recommendations was to put the pregnant woman "in the centre of care", which was explained as: professionals should take into account the expectations, desires and fears of the pregnant woman, and her medical and social risks.²⁶ Therefore it is important to know what women's wishes and expectations are with regard to maternity care.

The involvement of patients and clients in health care has increased over the past few decades, and can be seen by the growing amount of literature about informed and shared decision making and patient involvement (or activation, enablement, engagement, participation, and empowerment).^{26–32} The involvement of clients and patients in their care seems to result in more satisfaction with care and improved health care outcomes.^{31–32} Additionally, women's expectations and experiences of maternity care can influence decisions about the organization and provision of services and therefore are increasingly important to health care professionals, administrators, and health policy makers.^{2–4}

Little is known about women's perspective on how midwifery care could be improved and we would like to add the voices of women to the discussion about the organization of midwifery care in the Netherlands. At this moment, while changes are not yet institutionalized, the Dutch maternity care system offers an excellent opportunity to explore women's ideas and suggestions about maternity care within the still partly midwife-led care model. For that reason, we used open-ended questions to explore women's suggestions for improving (primary) midwifery care in the Netherlands.

METHODS

The DELIVER Study

This study is part of the "DELIVER" study, which was created to investigate the organization, accessibility, and quality of primary midwifery care in the Netherlands. Data from clients and practices were collected during the period from September 2009 to April 2011.³³

Recruitment

Clients were recruited from 20 midwifery practices. Purposive sampling was used to select practices, using three stratification criteria, region, level of urbanization, and practice type (dual practice with two midwives or group practice, with > 2 midwives). The 20 participating practices included 108 midwives and about 8200 clients per year. A more detailed description of the procedures followed in this study has been reported by Manniën et al.³³

Data collection DELIVER study

The primary aim of the "DELIVER" client questionnaires was to develop a profile of a pregnant woman in the Netherlands, her background, her health, her lifestyle, her work, her use of health care in general and to assess her expectations and experiences about midwifery care. Clients received up to three questionnaires depending on their gestational age at inclusion: questionnaire one (Q1 = early prenatal) was completed before 35 weeks (on average around 20 weeks' gestation), questionnaire two (Q2 = late prenatal) between 35 weeks and birth,

and questionnaire three (Q3 = postpartum) at about 6 weeks postpartum. Each of the three questionnaires consisted of 70–90 questions.

Evaluating suggestions for improvement

At the end of each of the three DELIVER questionnaires, women were asked to respond to the open-ended question: “Do you have any suggestions on how your midwife could improve his/her provision of care?” Their answers to these questions are the focus of this study.

Qualitative analyses

To investigate women's suggestions for improving midwifery care in the Netherlands, a qualitative thematic content analysis was performed using the software program MAXQDA (VERBI Software GmbH, Berlin, Germany). The open-ended questions resulted in short constructs of answers, which consisted of not more than 3 lines on average. To make it possible to distinguish the different periods in pregnancy and after childbirth, questionnaires from each time period were analysed separately. The data analysis was inductive. Two reviewers began the analyses by independently repeatedly reading the text segments. Thereafter, a systematic line-by-line analysis was performed to derive codes. One segment of text could contain several codes. One reviewer analysed the codes and then categorized them according to similarities to form overarching themes. A second reviewer independently coded responses and then compared that categorization with the first reviewer and consensus was reached. The next phase involved reviewing and refining the themes (to create a thematic map). To evaluate whether the thematic map fits the data set, the second reviewer coded around 100 responses with the map. If there was uncertainty, this was discussed between the reviewers until a consensus was reached. In this way, the essence of the content of each theme was identified. Themes are presented along with quotations of comments made by women, followed by age, parity, and questionnaire (Q1-early prenatal, Q2-late prenatal or Q3-postpartum) in parentheses.

In keeping with the exploratory purpose of this study, we did not quantify our results. The emergent themes are presented using a qualitative, descriptive approach whereby central themes are illustrated using quotes as a means of developing our understanding of the range of their perspectives and experiences. This study does not evaluate how widespread the voices examined here are.

RESULTS

Participants

Altogether we received 3499 answers to the open-ended questions derived from three questionnaires. These suggestions provide an insight into how midwives could improve their professional care. Figure 1 shows that 22.0 percent of women completed Q1 (early pregnancy)

and responded to the open-ended question. In Q2 (late pregnancy) and Q3 (postpartum) the percentage was 33.0 and 24.4, respectively. The group of respondents who completed the open-ended questions was similar to the group who did not complete the open-ended questions on age, parity, and nationality, but not on education level, with more women having a higher education level in the group who responded to the open-ended questions

(Table 1). The derived themes and subthemes are given in Table 2. In general, the suggestions were clustered around 1) provider characteristics or 2) service characteristics. The overarching concept of “individualized care” describes the desire of women to have their care adjusted to the individual (and her partner), as opposed to the increasing protocolisation of care. The concept of individualized care, which emerged within almost all themes, may include individualized numbers of consultations or home visits, individualized (quantity of) guidance and support, and individualized information provision. Respondents suggested that asking women and partners for their wishes and expectations would be a step toward accomplishing personalized care. Although in qualitative research it is not as much about quantity as about quality, it was interesting to observe that the majority of the comments concerned interpersonal skills, a shortage of information, and a lack of continuity of the care provider. In the following text, the midwife will be referred to as “she” although we know that there are men working as midwives as well.

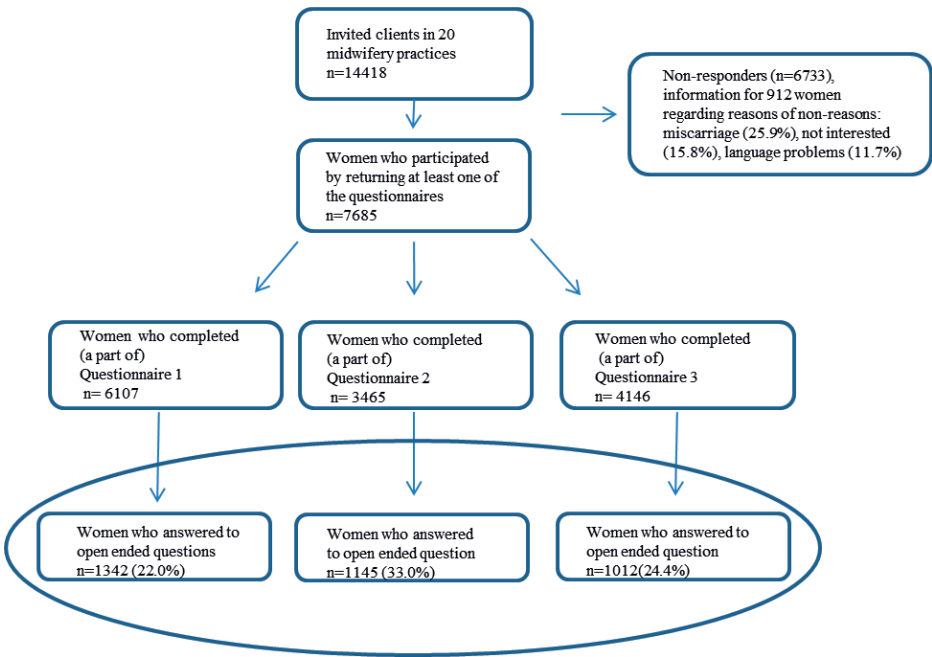


Figure 1. Number of participants of the “DELIVER” study, who responded to the open-ended question: “Do you have any suggestions on how your midwife could improve his/her provision of care?”

Table 1. Background characteristics of the women who responded to questionnaire one, two or three (Q1, Q2, Q3) of the Deliver questionnaires, organized by women who did or did not respond to the open ended question: "Do you have any suggestions on how your midwife could improve his/her provision of care?"

	Women who responded to the open ended question in Q1, Q2 or/and Q3 (n=2594)	Women who NOT responded to the open ended question in Q1, Q2 or Q3 (n=5093)	Overall survey sample; Women who responded to Q1, Q2 or/and Q3 (n=7685)
Age			
Year (mean)	30.81	30.38	30.52
Missing	3	5	8
Parity (%)			
Primiparae	1279 (49.5%)	2338 (46.0%)	3617 (47.2%)
Multiparae	1307 (50.5%)	2740 (54.0%)	4047 (52.8%)
Missing	6	15	21
Nationality (%)			
Dutch	2445 (94.5%)	4734 (93.3%)	7179 (93.7%)
Non-Dutch: Western	73 (2.8%)	139 (2.7%)	212 (2.8%)
Non-Dutch: Non Western	79 (2.7%)	199 (3.9%)	268 (3.5%)
Missing	5	21	26
Education level (%)			
Low	216 (8.4%)	957 (18.9%)	1173 (15.4%)
Middle	780 (30.2%)	1995 (39.4%)	2775 (36.3%)
High	1586 (61.4%)	2107 (41.7%)	3693 (48.3%)
Missing	10	34	44

Table 2. Themes and subthemes, created using a qualitative thematic content analysis of the responses to the "DELIVER" open-ended question: "Do you have any suggestions on how your midwife could improve his/her provision of care?"

Overarching concept: Individualized care	Main themes	Subthemes	
	Provider characteristics	Interpersonal skills	Interaction with client and others
		Communication	Communications skills Information provision
		Clinical competence	
	Service characteristics	Content and quantity of care	Additional or adjusted care Assistance and support Information
		Coordination of care	Time spent with client Continuity of care provider Continuity of care Accessibility Waiting time Involvement of students Administration/accommodation Being informed

Provider characteristics

Women made suggestions about the midwife as an individual and as a professional. When women made suggestions about the midwife as an individual, most suggestions were about the interaction between the midwife and the women/others, the midwife's communication skills, or about her personality and other characteristics. When women referred to the midwife as a professional, they frequently mentioned the midwife's competence and in particular their interpretation of the midwife's skills.

Interpersonal skills

Interaction with client and others

Women indicated that some midwives could be more friendly, respectful, and empathetic toward clients and partners. There was a clear demand to “be taken seriously” with a personal approach instead of a business-like approach. Women also wanted their midwife to be engaged with them during physical examinations and not to have interactions feel routine.

Keep every check-up “personal.” For them it is the next set of parents, but for the parents it is a very important moment that you look forward to, and you don’t want to get the feeling that everything is done in a hurry. (30 years, nulli, Q1)

Not so curt, and less business-like. (40 years, mult, Q1)

Take more time, and show genuine interest before and after childbirth. (31 years, nulli, Q3)

Many women indicated that they wanted the midwife to be more interactive with their partner, children, or others present during care. In the postpartum questionnaire, women referred to the sometimes dismissive interaction between the midwife and the maternity care assistant (maternity care assistants provide care for 8–10 days postpartum (3–6 hours per day). In addition, the midwife visits the new family three to five times during this period.²⁰

Think about my husband more, if he is present. He is not being involved sometimes. (23 years, nulli, Q1)

Take the opinion of the maternity care assistant more seriously, during the first week postpartum. She spends more time with the family after all, and she knows the possible problems. (30 years, nulli, Q3)

Communication skills

Women indicated that midwives could improve client-centred communication and suggested a number of other things, and midwives could improve their listening skills. Clients also expressed a desire for midwives to show that they take their clients seriously.

*Listen more carefully and be interested, sometimes seems to work routinely.
(29 years nulli, Q2)*

Listen to what someone says; I said that I had complaints with my pubic bone, but she kept insisting it was my stitches. (37 years, mult, Q3)

*Try not to use a childish "tone of voice." In everyday life I am a mature professional and despite my upcoming motherhood I would like to be approached that way.
(28 years, nulli, Q1)*

Information provision

Women wanted clear information presented in an unbiased fashion. Information should not be self-conflicting or ambiguous. A number of women felt that their midwife was trying to impose her own opinion during discussions, for example, promoting home birth and breastfeeding. Most women who mentioned information leaflets indicated that they felt they received too many and that this was not always appreciated.

In my opinion, don't promote home birth too much. (36 years, mult, Q2)

Things could be less pushy on breastfeeding. If you have made an informed choice to bottle feed, it would be nice if you also get some more information about this, instead of just keeping receiving leaflets about breastfeeding. (32 years, nulli, Q1)

Anticipate the person in front of you. For example; trying to give me brochures and booklets won't work. It is better not to be supply-oriented, but to ask if someone needs information about..... (31 years, mult, Q2)

Finally, the timing of information provision was of interest. Women commented that, in their opinion, some information was provided too early or too late.

Do not start about breastfeeding at 15 weeks. I understand that it is an important issue, but I can't do anything with it yet. (36 years, nulli, Q1)

Clinical competence

Negative experiences during their care triggered respondents, at all three time points, to identify skills and competence as an area for improvement. Examples of the experiences include harsh or painful examinations, forgotten actions, and incorrect or delayed actions. Women expected complete and correct knowledge and some women expected an active discussion and further probing about their pregnancy-related physical or psychological complaints. Some women raised concerns about the midwives' clinical judgment around timing of referral to another care provider—with women experiencing the referral that they felt was too late or (a very few others) too early.

Do the catheterization well at once instead of twice. (31 years, nulli, Q3)

One should have recognized that my son would be so big and childbirth should have been initiated earlier. (40 years, nulli, Q3)

Earlier referral to the obstetrician in the case of rising blood pressure. (28 years, nulli, Q3)

Don't refer to the hospital too early, but rely more on the instinct and body of the woman in labour. (28 years, mult, Q)

Service characteristics

The main theme “service characteristics” included comments concerning the content of care and the organization and coordination of care.

Content and quantity of care

Additional or adjusted care

The theme “content and quantity of care” includes comments about what in women’s opinion is part of the midwifery care or should be added or adjusted. This theme could also contain comments about the (personal preference of the) quantity of check-ups or visits.

Personally, they don't have to visit me so often during the postpartum period. (24 years, mult, Q3)

Visit slightly more often during the postpartum period. (32 years, mult, Q3)

For improvement of the prenatal care, most suggestions were about additional care, such as more ultrasounds, more (screening) tests, including blood and urine tests, and more weight monitoring. Furthermore, a few women appreciated a proactive offer of a consultation 6 weeks postpartum by the midwife.

An ultrasound, every month, to have a better insight into the health of the baby. (38 years, nulli, Q3)

More blood and urine tests, more than 2 times.... (30 years, mult, Q3)

Assistance and support

Most suggestions about the care during childbirth and postpartum were about assistance and support. Women expressed a need for more assistance and support at several stages of the process. During pregnancy, more attention should be given to their psychological well-being

and to the process of becoming a mother. Women wanted to talk about the upcoming birth more extensively. Also, the support in case of a miscarriage was regularly described as a possible area for improvement. During childbirth, an important aspect mentioned was the wish to be visited in the early onset of labour, after the women's first call. Women preferred the midwife not to leave her and her partner alone but to focus on her needs. In the postpartum period, women appreciate more support with breastfeeding. Many women expressed the need to see the care provider who had attended the birth soon after birth to talk about the childbirth and cope with the childbirth experience.

Besides technical medical attention, attention to the process of integration of being pregnant, giving birth and becoming a mother. (37 years, mult, Q2)

After a miscarriage, phone the client (back) to see how she is doing. (30 years, mult, Q1)

After the membranes are ruptured, remain in the house until the birth is over. Turn off cell phone at times when labouring woman has a hard time and needs help. Switch the phone to a colleague. (29 years, nulli, Q3)

After giving birth, in the first week postpartum, talk the childbirth experience over, this is what I have missed. And stay longer after childbirth. (28 years, mult, Q3)

Information

The comments in the questionnaires showed that there sometimes were shortcomings regarding individualized information provision. A rather large group of women would like to receive more information on a variety of topics, while others felt overwhelmed by all the information and suggested midwives should tailor the quantity of information to the women and their partners at each consultation.

Explain the entire process, how many consults, attendance after birth. More explanation during the physical examination of my belly, blood pressure, and heartbeats of the baby. (33 years, nulli, Q2)

Give better information about physical complaints during pregnancy! You're so inexperienced during your first pregnancy. (24 years, mult, Q1)

Only provide information if it is requested, ask if you can offer information. (36 years, mult, Q1)

Coordination of care

Time spent with the client

On average, women wanted the midwife to spend more time with them. In the prenatal and postnatal periods, women mentioned a lack of time during the visits: they also felt they did not always have the opportunity to ask their questions. Women indicated that they preferred the midwife to remain present for a longer period of time. Furthermore, some women suggested

the midwife could improve her profession by not attending to more births at the same time, being on time at the birth, and providing more care directly after the birth (on call shifts of Dutch midwives are described in detail by Baas et al.³⁴

Take more time for the check-ups, which are now so rushed that I only dare to ask the most necessary. Questions that have a lower priority, I search on the Internet.

(36 years, mult, Q1)

I had the misfortune of 5 births during the weekend, so the midwife was a bit tired and in a hurry. That was unfortunate. (32 years, mult, Q3)

Continuity of the care provider

During the whole period of pregnancy, childbirth, and in the postpartum period, there was a strong demand for continuity of the care provider. A known midwife present during labour and birth is the most frequently mentioned aspect. For several women this means a preference for just one or two midwives. In the case of a larger number of midwives, they felt that they did not have the possibility to form a bond. However, some women suggested that perhaps they should meet all the midwives, to avoid having an unknown care provider during childbirth.

Keep seeing the same one or two midwives. Not so many different faces every time!

(31 years, mult, Q2)

I have got the feeling that I have been sitting in front of too many different midwives, so you could not build a relationship with one of them, it feels like you are a number.

(32 years, nulli, Q2)

Continuity of care

At all three time points, women indicated that they did not appreciate discontinuity of care, for example, caregivers who did not know what was said at previous appointments so that women had to repeat their personal story. Better communication among the midwifery teams appears to be needed to make sure the different midwives use the same approach of care, and give information and advice in a consistent manner.

With several midwives you get different opinions, in my case, they are not the same. Because of this, as a future mother you get insecure and this is not necessary if everyone is aware. (31 years, nulli, Q2)

Women noted that interdisciplinary collaboration and referral could be improved. Some mentioned that information transfer could be better. After responsibility for the care was transferred to the obstetrician during pregnancy, women appreciated if their midwife stayed in touch. Others preferred the midwife to accompany her and her partner to the hospital and

assist them during a referral (stay to talk to the hospital staff) or in case of transfer during labour, and to stay until the child is born.

Improve the communication with the hospital and agreeing on policies about the referral. (37 years, nulli, Q3)

*During admission to the hospital with a medical reason, call in more often, instead of a single phonecall and instead of only seeing each other again after the birth.
(33 years, mult, Q3)*

Accessibility and waiting time

A topic that was mentioned very frequently was the long waiting times. Additionally, women suggested an increased accessibility of the practice by telephone. They would also appreciate more possibilities to visit the practice for prenatal consultations and ultrasounds. In general, accessibility of midwifery practices could be improved.

Consultations are from 9:00 to 14:00, therefore I often had to take off from work. I would like extended times to make an appointment. (28 years, nulli, Q2)

*Not every day an ultrasound is possible, which is unfortunate if you think you have had a miscarriage and then you have to wait another day for the answer.
(29 years, mult, Q2)*

Involvement of students

Women often pointed out that the way that students are educated in practice can be improved. Women suggested that student midwives should not be given too much responsibility and must always work under the supervision of the midwife. In addition, having too many different students in the practice was highlighted as a problem by some women. Women preferred the midwife herself to ask the women for permission to have a student present and the midwife should divide her attention properly between the woman and the student.

In my opinion, they let a certain student loose to soon, when that wasn't appropriate yet. (22 years, mult, Q3)

Do not leave everything to trainees. Redo all the check-ups themselves, after the student has performed them, such as blood pressure etc. (32 years, mult, Q1)

Administration, accommodation, and being Informed

There were a few comments about the accommodation, such as a preference for a more home-like environment, privacy in the building, and availability of parking spaces. Administrative problems with the planning of the consultation were also indicated. Some of the women mentioned that they liked to be updated about the current state of affairs in the midwifery practice, such as changes in the organization of the practice and if there are new locums. Additionally,

women indicated that if they cannot be seen at the scheduled time, they would appreciate it if this would be communicated to the people in the waiting room.

Sometimes they run over time enormously, maybe they could report this to their clients in the waiting room. (30 years, mult, Q3)

DISCUSSION

Our study explored women's experiences with their midwife and midwifery care and studied women's suggestions for improving midwifery care in the Netherlands. Our purpose was to involve women by adding their perspective to the discussion about the maternity care system in the Netherlands. The women's suggestions could be clustered around provider characteristics, including interpersonal skills, communication, and competence, and around service characteristics including content and coordination of care. In almost all themes, a desire emerged for "individualized care." Although in qualitative research, it is not as much about quantity as about quality, it was interesting that the majority of the comments were about interpersonal skills, information provision, and a lack of continuity of the care provider. Informed by the suggestions of the women, women and their families would be served by: a more personal, friendly approach with enough time spent per client, more information and information specifically tailored to the person, and more continuity of care provider during the prenatal, natal, and postnatal periods. Although the Dutch maternity care system may be unique in some regard, the themes identified as shortcomings or points for improvement by women are likely to apply similarly in other jurisdictions.^{3,6,8-9,35-38} Interpersonal skills, the importance of kindness, being taken seriously, and being listened to have been reported by women in many other countries and in other systems.^{3,8-9,35-37,39} The lack of information and the lack of individually tailored information were some aspects that were discussed and researched in Sweden, Australia, and England.^{8,37,40} Internationally there is less consensus with respect to the importance of continuity of the caregiver. While some studies described continuity of the caregiver as important and highly valued by women^{9,20,41-42,44-46}, others concluded that the focus on continuity of the caregiver through pregnancy, childbirth, and postpartum may be misguided.^{6,15,20,38,43} Our study found that women would appreciate more continuity of the caregiver, a finding that is consistent with earlier research findings from the Netherlands.^{20,42} All themes derived in our study were direct or indirect elements within person-centred care, or in the case of maternity care, women-centred care.⁴⁷⁻⁴⁹ A more women-centred and individualized approach, which keeps clients informed and actively involved in their care, would likely increase women's satisfaction with the maternity care experience.³⁶ One model of maternity care, which has a focus on women-centred care is the midwifery-led continuity model. The philosophy behind the midwifery-led continuity model is normality, continuity of care, and being cared for by a

known, trusted midwife during childbirth.¹⁸ However, even in a context where some women receive midwife-led continuity care, there is still a desire for more individualized care. Ironically, the current developments in the Netherlands are not moving toward a more midwifery-led continuity of care model but toward an integrated/shared care model and more protocolised care.²⁵ More protocolised care potentially carries the risk of moving away from individualized care,⁵⁰ which makes the case for it to be carefully assessed, the remodelling of the current system to assure that the voice of women is adequately heard and heeded. To make improvements in the existing maternity care system, some suggestions require greater adjustments to implement than others. For instance, really listening to pregnant women and their partners and treating them well does not necessarily require additional financial commitments. This could be an important way to start improving quality and satisfaction.³⁶ Perhaps more challenging is to spend more time with women who need it and provide women with individualized information. These aspects should be possible to arrange in the current maternity care system, although this might have financial implications. More continuity of the care provider throughout the prenatal, intrapartum, and postnatal period will require more effort and probably will also require a decrease in the current caseload per midwife, which brings financial implications with it.

The open-ended questions, answered by a large number of women who started their care in primary care, provided extensive information on the experiences, opinions, and suggestions of women about their midwives and the maternity care system in the Netherlands. One of the disadvantages of the survey method we used is a limited length of responses and lack of opportunity for further clarification that can be gained by personal interview approaches. The advantage of this method was that we could sample a large number of women. The sample favoured those who were motivated to answer the questions. Despite the stated limitations, the study provides valuable insight into the perceptions and views of women about the maternity care (organization) they experienced. We recommend that midwives and midwifery organizations explore mechanisms to enhance individualization of care to address some of the issues raised by women.

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CHAPTER 7

Women's comments about what aspects of midwifery care they value in the maternity care system in the Netherlands

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Submitted

ABSTRACT

Background: Women's experience of their care during pregnancy and childbirth is important. In a previous article we described suggestions made by women on what could be improved about the midwifery care in the Netherlands.

Aim: In this study we focus on what women have valued in the care they received and what they think their midwives should definitely not change about the midwifery care they received.

Methods: This study is a sub study of the 'DELIVER study, a national cohort study in the Netherlands. We analysed the open ended question: "What should your midwife definitely keep doing?". A qualitative thematic content analysis was performed.

Findings: Overall, 11437 answers, given by 6715 women, were analysed. Codes, themes, main themes and an overarching concept were derived. The findings strengthened the thematic map developed in our earlier research. In general, comments could be grouped in two main themes, 1) provider (midwife) characteristics 2) service characteristics.

Discussion: Our findings correspond to items that women identified as missing in their care. All themes derived were direct and indirect elements of person (woman)-centred care. We conclude that women are served by a person-centred approach which includes; a friendly and kind attitude, client-centred communication, really listening, personal attention, taken seriously and reassuring, more information and information tailored to the person, accessibility and approachability, continuity of care and care provider and with enough time spent with the woman. Woman-centeredness and women's perspectives should play a crucial role in defining the current development of maternity care in the Netherlands.

Keywords: maternity care, women centred care, women's experiences

INTRODUCTION

Women's experience of their care during pregnancy and childbirth is important in all cultural contexts.¹ Both positive and negative experiences of pregnancy and childbirth can have a life-long impact. There is little doubt that maternity care providers are important contributors to these experiences.¹⁻³ Involving clients in their care consistently results in increased satisfaction as well as significantly better health outcomes. Women's perspectives should be an important aspect in the development and improvement of maternity care services by healthcare professionals and health policy makers.⁴⁻⁷

In the Netherlands the maternity care system is organized in echelons, with a division between primary, secondary and tertiary care.⁸ In primary care, community midwives provide care to low-risk women with uncomplicated pregnancies and childbirths. Obstetricians and clinical midwives provide care (in hospital) to high-risk women or women with complicated pregnancies or childbirths. In case of complications, or if the woman requests pharmacological pain relief during childbirth, she is referred to secondary care providers in the hospital. In the Netherlands, low risk women can choose to give birth at home or in a hospital (setting). Most women receive postpartum care at home from a team of community midwife and maternity care assistant-team, for 1-10 days postpartum with the actual duration depending on length of hospital stay after birth.⁹ In recent years, the Dutch organization of maternity care has been the subject of much discussion following reports indicating that reductions in perinatal mortality were lagging, compared to other European states.¹⁰⁻¹³ A commonly aired suggestion was that perhaps the unique Dutch maternity care system with independent primary care midwives might have been a contributing factor – a suggestion that has, however, not been substantiated. A major focus of attention in discussions among the professional groups, and in the public domain through national media outlets, has been on the need for a more integrated healthcare system with fewer barriers between echelons of care.^{11,13} In 2009, the Dutch Minister of Health instructed a committee ('Steering Group Pregnancy and Childbirth') to draw up recommendations that could improve the organization of maternity care. The report recommended putting the pregnant woman 'in the centre of care' and that maternity care providers focus more specifically on the expectations, wishes and anxieties of pregnant women.¹³

There has been limited systematic investigation of women's perspectives on midwifery care. We set out to add their voices to the current discussions about the maternity care organization in the Netherlands. In a previous article we described the analysis of 3499 suggestions made by 2594 women on what could be improved about midwifery care in the Netherlands.¹⁴ That study provided a framework identifying what women wanted their midwives to change and do differently. In this study we focus on what women have valued in the care they received and what they think their midwives should definitely not change about the midwifery care they received.

This research adds to our understanding about what women appreciate and (definitely) want to keep with regards to the midwifery care, and contributes to a more complete understanding of women's thoughts and perception of the midwifery care in the Netherlands.

METHODS

The DELIVER study

Study design

The methods in this paper follow the methods used in an earlier paper (described elsewhere).¹⁴ In summary; this study is a sub study of the 'DELIVER study, a national cohort study in the Netherlands, which was set up to investigate the organization, accessibility and quality of primary midwifery care in the Netherlands.¹⁵

Depending on the gestational age at inclusion, participants completed up to three questionnaires: The first questionnaire was completed before 35 weeks (early prenatal questionnaire, mean completion around 20 weeks), the second between 35 weeks and birth (late prenatal questionnaire), while the third questionnaire was completed post-partum (postpartum questionnaire, on average 6 weeks post-partum).

Participants DELIVER study

During a period of 18 months clients were recruited from twenty midwifery practices with a total of 108 midwives, serving about 8200 clients per year.

Measures of this study

In each of the DELIVER questionnaires women were asked to respond to the following open-ended question: "What should your midwife definitely keep doing?" The answers to this question are the focus of our current study.

Data analyses of this study

The data-analyses were carried out using the same technique as we used in our prior paper.¹⁴ A qualitative thematic content analysis was performed, using the software program MAXQDA (VERBI software GmbH, Berlin, Germany). The open-ended questions yielded short constructs of answers (usually 2-5 sentences). Four researchers performed (after independently reading text segments repeatedly) a systematic line-by-line analysis to derive codes. One reviewer analysed the codes and then categorized them according to similarities to form overarching themes. These themes were submitted to and discussed with the other three researchers who had coded the text segments, until consensus was reached.

Themes are presented in the results along with examples of comments made by women (age, parity and questionnaire are given in parentheses).

RESULTS

Participants

Overall, 11437 answers were given by 6715 women to the open-ended questions, derived from the three questionnaires. Of all participating women the proportion responding to the open-ended question at each time point was as follows: 5123 (=83.9%) in the early prenatal, 3008 (=86.8%) in the late prenatal and 3306 (=79.7%) in the postpartum period (Figure 1). Characteristics of women who responded to the open-ended question in one or more of the questionnaires were similar to the women who did not respond to the open-ended question in terms of age and parity, but not in terms of nationality and education. Women with lower levels of education and with a nationality other than the Dutch nationality responded less frequently to the open-ended questions.

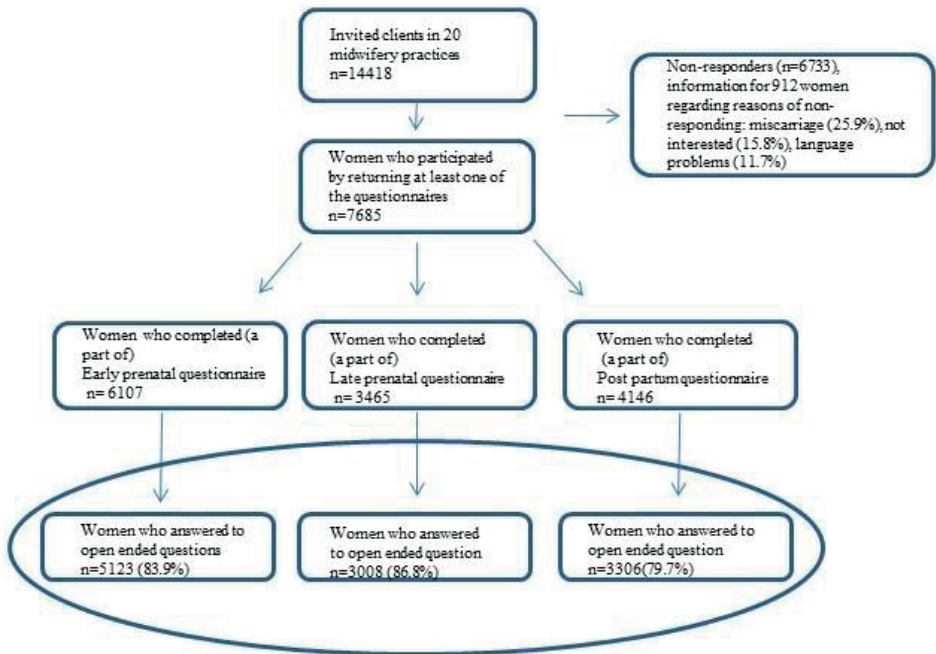


Figure 1. Number of participants of the “DELIVER” study, who responded to the open-ended question: “What should your midwife definitely keep doing?”

Table 1. Background characteristics of the women who responded to the early prenatal, late prenatal and/or the postpartum questionnaire of the Deliver study, divided into women who did or did not respond to the open-ended question: “What should your midwife definitely keep doing?”

	Women who responded to the open-ended question in one of the questionnaires (n=6715)	Women who <u>NOT</u> responded to the open-ended question in one of the questionnaires (n=970)	Overall survey sample of the DELIVER study (n=7685)
Age			
Year (mean)	30.57	30.20	30.52
Missing	7	1	8
Parity (%)			
Nulli/primi	3145 (46.9%)	472 (49.1%)	3617 (47.2%)
multi	3557 (53.1%)	490 (50.9%)	4047 (52.8%)
Missing	13	8	21
Nationality (%)			
Dutch	6372 (95.3%)	807 (84.5%)	7179 (93.7%)
Non-Dutch: Western	157 (2.3%)	55 (5.8%)	212 (2.8%)
Non-Dutch: Non Western	174 (2.6%)	94 (9.7%)	268 (3.5%)
Missing	12	14	26
Education level (%)			
Low	938 (14.0%)	235 (24.7%)	1173 (15.4%)
Middle	2413 (36.1%)	362 (38.0%)	2775 (36.3%)
High	3338 (49.9%)	355 (37.3%)	3693 (48.3%)
Missing	26	18	44

Thematic content analyses

The thematic map developed to report the suggestions of women to the open-ended question (in one of the three questionnaires): “What should your midwife definitely keep doing?”, is shown in table 2. Findings from the analyses resembled closely the thematic map developed in our earlier research probing what women would like to see improved (changed) in midwifery care, thus we decided to build on to this prior framework.

Table 2. Thematic map developed in this study: Main themes, subthemes and codes created using a qualitative thematic content analysis of the responses to the ‘DELIVER’ open-ended question: “What should your midwife definitely keep doing?”

Overarching concept: Individualized care	Main themes	Subthemes	Codes (more detailed subthemes)
	Provider (midwife) characteristics	Interpersonal skills	Professional behaviour
			Personal attention
			Being taken seriously
	Service characteristics	Communication skills	Trust/ building a relationship
			Reassure/empower
			Attention for partner /family members
		Clinical competence	Communication
			Supporting the woman’s decision
			Advise
			Expertise
		Content of care	Content (and quantity) of care
			Information
		Coordination of care	Time (spent with client)
			Continuity of care (provider)
			Accessibility

Thematic map

Many comments were very generic and reflected that the midwife should keep doing what she already does (“Go on working the way you do” and “ don’t change”). We coded these comments but did not put them in the thematic map as they were too broad. All other suggestions (apart from the generic ones), could be grouped in two main themes, focusing on 1) provider (midwife) characteristics and 2) service characteristics. In accordance with our prior work, the overarching concept of individualized care emerged within almost all the themes and describes the desire of women to have their care adjusted to them individually (and their family). We used the definition that in individualized care the clinician considers the unique needs and specific health concerns of the person to provide customized interventions.¹⁶

Suggestions about individualized care included the personal interaction with her midwife and the content or organization of care. Although in qualitative research it is not as much about quantity as it is about quality, we observed that the majority of comments were about the personal relationship between the woman and her midwife, and communication between the woman and her midwife.

Throughout this article the midwife as well as the client will be referred to as ‘she’ although we know there are men working as midwives as well and male partners of pregnant women can also be considered clients. All themes will be reported and illustrated by quotations of comments made by women. To provide context, the quotations are followed by age, parity and questionnaire (early prenatal, late prenatal or postnatal) in parentheses.

Provider (midwife) characteristics.

The women's suggestions about her provider (midwife) characteristics were focused on interpersonal skills, communication skills and clinical competences of her midwife. The themes interpersonal skills and communication skills are discussed separately, although we realize that these themes are closely related.

Interpersonal skills

This subtheme describes the interaction between women (and their families) and their midwife and the women's perceived treatment by their midwife. This theme includes the following codes: professional behaviour, personal attention, being taken seriously, trust/ building a relationship, reassure/empower and attention for partner/family members.

Professional behaviour

Many women commented on aspects of their midwife's professional behaviour (good bedside manner), including a range of positive character traits. Women mostly indicated that midwives should remain friendly and kind, but women also wanted the approach to care to remain empathic, understanding, enthusiastic, spontaneous, caring, honest, patient and down to earth.

"Continue to stay so friendly, calm and polite."

(31 yr, nulli, postpartum questionnaire)

"Stay competent, patient, friendly, supportive. Keep giving lots of information that you can really use. I think they're great!!"

(30 yr, nulli, postpartum questionnaire)

"Stay who she is: down to earth, clear, calm and very involved!"

(40 yr, multi, postpartum questionnaire)

Personal attention

Women clearly appreciated their midwife's personal approach. Women described that they appreciated that they were actually seen as a person and not a number by their midwife. Women liked their midwife being fully engaged with them and personally interested.

"The contact with the pregnant woman is very personal. I never feel like a number etc. but I feel really important and taken seriously. That is very nice."

(29 yr, multi, late prenatal questionnaire)

"Keep being so friendly and interested, making you feel that you are special!"

(40 yr, multi, postpartum questionnaire)

"A personal approach and sympathizing during the experience, not a too scientific or business-like approach."

(30 yr, nulli, early prenatal questionnaire)

Being taken seriously

Being taken seriously was an important aspect of the interaction between the woman and her midwife. This was frequently mentioned by women.

"Keep taking pregnant women seriously and keep treating them in the same loving and professional way."
(29 yr, nulli, postpartum questionnaire)

"Take us seriously, reassuring during childbirth. Overall I had a great midwife during childbirth."
(31 yr, nulli, postpartum questionnaire)

Trust/ building relationship

In this theme women explicitly described their appreciation of a trusting relationship with their midwife, that a personal bond was created. Women valued not only being able to trust their midwife but also feeling that their midwife trusted them.

"Creating a confidential and warm relationship, through which you dare to express and share your story and possibly your emotions. And the check-ups are more than only checking measurements."
(34 yr, multi, early prenatal questionnaire)

"Give the feeling that there is a bond between mother and midwife, this provides trust."
(34 yr, multi, postpartum questionnaire)

"Continue to be friendly (the feeling that you have known someone for years) and professional."
(29 yr, nulli, postpartum questionnaire)

Reassurance and empowerment

Women valued reassurance provided by their midwife and appreciated it when their midwife gave them confidence. They wanted to feel empowered by their midwife. Some women mentioned that they liked their midwife being positive and optimistic, and valued positive reinforcement.

"Encourage and reassure the client. I got the feeling that I was doing it all right which gave me a lot of self-confidence and made me think 'I can do this'."
(26 yr, nulli, postpartum questionnaire)

"Confidence, reliability, they allow me to respect myself."
(29 yr, nulli, late prenatal questionnaire)

"Give me the confidence that I am experiencing the pregnancy in a good way and that I can look forward to the birth with confidence."
(28 yr, nulli, late prenatal questionnaire)

Attention for partner (or family)

A smaller number of women mentioned that they valued their midwife for involving their partner and family members in the care during consultations, birth or postpartum.

Continue to have so much attention for people and keep the partner so well involved.
(30 yr, nulli, late prenatal questionnaire)

Keep on showing interest in my family members.
(42 yr, multi, late prenatal questionnaire)

Communication skills

This subtheme describes aspects of communication by the midwife and included the codes: communication, supporting the woman's decision and providing advice.

Communication

Women appreciated client-centred communication. A large proportion of the women mentioned that they valued their midwife listening to them. Women also wanted midwives to continue asking women whether they had questions, responding to questions and communicating clearly, openly and honestly.

"Keep on listening so well and reassuring expectant mothers. Keep answering all questions so patiently!"
(31 yr, nulli, postpartum questionnaire)

"Keep on communicating well and listening to the people as they always do."
(34 yr, multi postpartum questionnaire)

"Keep on communicating openly and honestly."
(31 yr, nulli, late prenatal questionnaire)

Supporting the woman's decision

A small proportion of the women explicitly mentioned that choices about their health, their baby's health or the care should be made by themselves. Women also wanted their choice to be respected.

"Listen to the people who come into her practice. Make it possible to talk about everything, without pushing one's own opinion. Let people make their own choices."
(28 yr, multi, postpartum questionnaire)

"Keep providing lots of information, and leaving the choice to the patient, as they do well already."
(26 yr, nulli, postpartum questionnaire)

"Advise, but not decide."
(25 yr, nulli, early prenatal questionnaire)

Advice

Some of the women also valued advice (not only information) during decision-making. Some women even mentioned that they appreciated unsolicited advice.

"Take the time and give advice, even if you do not ask for it yourself, eg breastfeeding, pain relief, etc."
(33 yr, nulli, late prenatal questionnaire)

"Listening and advising on difficult decisions."
(31 yr, multi, postpartum questionnaire)

"Giving a lot of advice, both when asked and not asked."
(30 yr, nulli, late prenatal questionnaire)

Clinical competence

This subtheme contains a small proportion of the suggestions made by women and describes the clinical skills of the midwife, or more specifically the woman's interpretation of the midwife's clinical skills.

Expertise

Women indicated that their midwife should keep on being skilled, competent and professional. Words used to describe providing care included 'expert', 'reliable' and 'good'. Women also spoke of maintaining the ability to take action, be proactive, and decisive when appropriate, and able to respond to complications.

"Stay alert to the complaints, and act on these in a timely way. They have acted well in this respect."
(25 yr, multi, late prenatal questionnaire)

"Keep knowledge and skills up-to-date."
(34 yr, multi, postpartum questionnaire)

"Respond adequately to complications, go to hospital at first sign of fetal distress."
(34 yr, multi, postpartum questionnaire)

Service characteristics

Service characteristics were classified in two subthemes: content and quantity of care and coordination of care.

Content of care

This subtheme shows women's suggestions about what they like maintained with regard to the content of care and partly the quantity of care. The subtheme includes the codes: content (and quantity) of care and information.

Content (and quantity) of care

Women valued the content and quantity of care being tailored to the person, such as enough time spent per person. Many identified that their midwife should keep doing the check-ups and providing support in pregnancy and childbirth. Women also mentioned that they liked the ultrasounds, the possibilities for personally adjusted quantity of check-ups and visits, the postpartum (6 weeks) consultation, consultations at home and debriefing the birth. In the postpartum questionnaire many women mentioned the caring support during childbirth .

“Schedule extra time or more frequent check-ups when it is needed. We have appreciated the additional attention and time after our two miscarriages.”

(28 yr, nulli, early prenatal questionnaire)

“Support/guide childbirth the way she does now.”

(28 yr, multi, postpartum questionnaire)

“The support during childbirth was excellent. It was very nice afterwards (a few days later) to be able to talk about this so that I could better cope with the childbirth.”

(32 yr, multi, postpartum questionnaire)

Information

Women indicated that their midwife should keep providing information. Especially in the early and late prenatal questionnaire women stated that they appreciate a large amount of information and explanation about a wide variety of subjects and that information was correct and clear information.

“Provide information about childbirth. Do not wait for questions. Especially in case of a first pregnancy. You still know too little to be able to ask all the right questions.”

(28 yr nulli, postpartum questionnaire)

“Explain clearly what to and what not to expect (for example about pain relief).”

(36 yr, multi, postpartum questionnaire)

“Discuss all options (where, how to give birth, pain relief), inform during pregnancy (tell a lot, if necessary with checklist).”

(37 yr, multi, postpartum questionnaire)

Coordination of care

This subtheme is about how the midwifery care is coordinated and organized. Women appreciated the coordination and organization required to adapt care to their personal needs. This subtheme includes the codes: time (spent with client), continuity of care (provider) and accessibility. The themes time and continuity are being discussed separately although they partly overlap. For example, if a woman values her midwife staying during childbirth, she could

indicate to appreciating extra time spent with her and also the continuity of care and care provider.

Time spent with client

Women valued their midwife having and taking the time during consultations, the birth and the postpartum period. They valued their midwife being unrushed.

"Take the time (I have never had the feeling that I needed to hurry up because the next one was waiting)"
(30 yr, nulli, late prenatal questionnaire)

"After childbirth visit regularly and take the time for conversation."
(26 yr, nulli, postpartum questionnaire)

"Being present all the time, during childbirth."
(29 yr, multi, postpartum questionnaire)

Continuity of care (provider)

Some women mentioned that continuity was appreciated, described as continuity in care provider and continuity in the way the care is provided. Women mentioned that they valued knowing their midwife and appreciating their midwife for keeping in touch, when care was transferred to the obstetrician during pregnancy. Especially when the care was transferred during childbirth women indicated to value that her midwife stayed with her.

"To let you get to know all the midwives so you do not see a stranger at birth."
(22 yr, nulli, postpartum questionnaire)

"Keep in touch during a hospital admission. This was done by phone , but also face to face. I felt noticed and heard and could take certain decisions with them. This was really great."
(30 yr, multi, postpartum questionnaire)

"I was very satisfied with the support during my birth. Very nice that she just stayed with me in hospital, that gave me a safe and confident feeling."
(32 yr, nulli, postpartum questionnaire)

Accessibility

Women liked the fact that their midwife was accessible, in the sense of being approachable and easy to reach. Women mentioned that they felt their midwife was there for them, was accessible to them and that they could call their midwife when they were worried or had a question.

"Go on like this, they are always available for questions or when you are worried you can always contact them. This is a very nice feeling."
(27 yr nulli, early prenatal questionnaire)

"Maintain the approachability they have now to ask questions/ to ask for advice, etc."
(30 yr, multi, early prenatal questionnaire)

"Support before, during and after childbirth / miscarriage is very nice. Also very nice that I could always reach them and they were immediately available."
(29 yr, nulli, early prenatal questionnaire)

DISCUSSION

The purpose of this study, as that of the previous one, was to add women's voices to the discussion about the reorganization of maternity care in the Netherlands and add women's suggestions about what needs to be preserved in midwifery care to the earlier presented suggestions about what should be improved in midwifery care in the Netherlands. We did this by asking: "What should your midwife definitely keep doing?" as part of a large national survey in the Netherlands.

Main Findings:

Overall, 11437 answers, given by 6715 women, were analysed. By using a thematic content analysis we were able to derive codes, themes, main themes and an overarching concept. Our study findings closely aligned with the thematic map developed in our earlier research that examined women's recommendations for changes to their midwifery care.¹⁴ In general, comments could be grouped in two main themes, 1) provider (midwife) characteristics 2) service characteristics. As in our previous work, the over-arching concept of individualized care emerged in this study within almost all the themes including personal interaction with their midwife, and the content or organization of care. Thus, it would appear that women highly value this component of care, as they identify it as a needed addition when it is absent¹⁴ and as an appreciated aspect when it is present.

Many comments focused on maintaining a positive professional midwife-client relationship. Compared to the prior study, women in this study stated in more detail what they appreciated about the personal relationship between the woman and her midwife, such as the personal approach, trust and empowerment. Women wanted to receive both solicited and unsolicited advice, however they also wanted to maintain control over decision making and for midwives to continue to support decision made by women. This is consistent with our earlier findings¹⁴, in which women identified that midwives should not impose their own opinion on the woman. Women appreciated their midwife taking enough time for them and providing continuity of

care provider. These aspects of care may facilitate the ability of midwives to provide appropriate advice and support for women's decisions.

Interpretation of findings:

All themes derived were direct and indirect elements of woman (person)-centred care.¹⁶⁻¹⁹ We conclude that women and their families should be served by a woman-centred approach including: a friendly, kind, involved approach, client-centred communication, really listening, personal attention, taken seriously and reassuring, more information and information tailored to the person, accessibility and approachability, continuity of care and care provider and with enough time spent with the woman. These elements which women valued in our study are also shown to be important to women internationally. In a review by Small et al (2014) they found that women appeared to have very similar ideas about what they want from their maternity care, which also included attentive and individualized care with adequate information and support, notwithstanding the diversity of countries and cultures of origin of the women.²⁰

It has been shown that a woman-centred approach will contribute to a better experience with care.¹⁸⁻²² Epstein and Street (2011) wrote about the value of patient-centred care stating that "The originators of client-centred and patient-centred health care were well aware of the moral implications of their work, which was based on deep respect for patients as unique living beings, and the obligation to care for them on their terms. Thus patients are known as persons in context of their own social worlds, listened to, informed, respected and involved in their care and their wishes are honoured (but not mindlessly enacted) during their health care journey".²³ An important element of woman-centred care is woman (patient)-centred communication. The domains of patient centred communication were directly or indirectly mentioned by the women in our study. Communication plays a vital role in the relationship between a woman and her midwife. Language use is key to effectively communicating options, recommendations and respectfully accepting a woman's fully informed decision. Like Mobbs and others (2018) stated: "Language signals the nature of the relationship between woman and caregiver, and can deny or respect a woman's autonomy. This challenge resonates worldwide and is now being addressed by recent WHO research".²⁴

Internationally, policy makers and service providers have recommended that maternity services become more woman centred. Implementation of midwife led approaches emphasizing woman centred care have shown to offer equivalent levels of safety with added benefit of giving women more choice resulting in more positive pregnancy, birth and postnatal experiences.²⁵⁻²⁶ Findings from our study reflect these findings.

Conclusion:

Our study found that the aspects of care women experience and value is similar what women previously identified as important when it was absent from their care.¹⁴ The findings of our two studies, taken together, confirm that women have clear ideas about what they want in

their care, based not only on what they did experience, but on what they wished to experience. Woman-centeredness and women's perspectives should play a crucial role in defining the current development of maternity care in the Netherlands. In the current climate of change in health care, including developing integrated care, efforts must be made to ensure that care continues to be individualized in keeping with the wishes of Dutch women. Discussions and research around organization of care are still ongoing. Birthing women have important input and should be involved more prominently to ensure that their suggestions are heard and perceptions understood.

For research in the future we recommend additional in-depth interviews which enables further questioning and clarification and we recommend research that includes women in both primary and secondary care to represent a larger group of women in the Netherlands.

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CHAPTER 8

General discussion and implications



GENERAL DISCUSSION

This thesis contributes to our knowledge of the organization and women's views of maternity care in the Netherlands. We undertook six studies to explore this aim from a variety of different perspectives. Suggestions about and the experience with primary midwifery care in the Netherlands were studied and women's and maternity care assistants' perspectives about continuous support during childbirth were explored. The specific study aims were as follows:

1. To understand the relation between client related factors and the experience of intrapartum midwifery care in order to give midwives insight into how they might improve the care they provide during childbirth.
2. To explore the opinion of maternity care assistants about providing continuous support during childbirth and performing additional medical tasks.
3. To explore women's perspective on support during and after childbirth including preferred provider of support, and the type and timing of supportive activities.
4. To develop an understanding of the uptake of maternity care assistance during the postpartum period in the Netherlands and examine which factors affect women's ratings of postpartum maternity care by maternity care assistants.
5. To explore women's ideas and suggestions about maternity care within the current maternity care model.
6. To explore what women have valued in the care they received and what they think their midwives should continue doing.

In this chapter, a summary and discussion of the main findings of this thesis are given, followed by methodological considerations, and the implications for practice, policy and research.

WOMEN'S NEEDS AND THE ORGANIZATION OF MATERNITY CARE

Overall, we can conclude that women are positive about maternity care in the Netherlands. The mean rating of the antenatal, natal and postnatal care was 8.8 or more (on a scale from 1 to 10, with 1 indicating the worst possible care and 10 indicating the best possible care).¹

We can also conclude that women value the following components of care: experienced control, women (person)-centeredness and women (person)-centred communication, individualized maternity care, extra time spent per person and continuity of care and of maternity care provider. These five components are also identified in the international literature regarding the values, needs and experiences of women in relation to maternity care.^{2-22,24,26-30,34-35} Similar components were indicated in a multi country systematic review which reported that experiences during childbirth were reported as unsatisfactory when they occurred in the absence of one or more of the following situations: quality care promoting wellbeing with a focus on individual needs, unrushed caregivers who provide continuity of care and communicate effec-

tively, involvement in decision making about care and procedures and kindness and respect.² Furthermore, a study by Larkin (2009), although mainly focused on the childbirth experience and not on the total experience of care, concluded that important concepts of 'the childbirth experience' are control, support and the relationship with caregiver (and pain).³

In our study of client-related factors associated with a "less than good" experience of midwifery care during childbirth (chapter 2), we found that during childbirth, sense of control during the dilation and pushing phase was related to the experience with received care. A woman's sense of control during childbirth is internationally consistently described as a major contributing factor to a woman's childbirth experience and her subsequent well-being.⁴⁻⁶

To improve a woman's sense of control during childbirth, several studies have shown that informing women of options and choices available and involving them in decision making helped women feel more in control.⁷⁻⁸ For example, a Dutch study found that having an influence on birthing positions in labour, the choice for home birth and shared decision-making contributed to women's sense of control.⁹ A study from Green et al reported that *'the ways in which women are helped to deal with pain will affect internal control; the extent to which they feel that they are actually cared about, rather than care being something that is done to them, will affect external control'*.⁶

The theme of woman-centeredness emerged in several chapters in this thesis. In chapter 2 we found that during childbirth, woman (person)-centeredness almost fully explained the experience with the received care. This was also a finding in chapter 5 where the woman-centeredness of the maternity care assistants was found to be very closely related to the overall rating of her care. These findings are in line with a recent study from Todd et al. (2017) which demonstrated that *"women who were 'always or almost always' treated with kindness and understanding were 1.8-2.8 times more likely to rate their antenatal, birth and postnatal care as 'very good' care"*.¹⁰ In chapters 6 and 7 we found that all themes emerging from the studies were direct and indirect elements of woman(person)-centred care.¹¹⁻¹⁴ Those chapters concluded that a more woman-centred and individualized approach keeps clients informed and actively involved in their care, and will likely increase women's satisfaction with the overall maternity care experience. This is also in line with the results of a review by Hodnett et al., who described that *"personal expectations, the amount of support from caregivers, the quality of the caregiver patient relationship, and involvement in decision making, appear to be so important that they override the influence of background and other characteristics, when women evaluate their childbirth experience"*.⁴ Other studies regarding health care providers report similar results.¹⁵⁻¹⁶ Interpersonal skills and the importance of kindness, being taken seriously and being listened to have been reported by women in many other countries and in other systems.^{2,17-18} Epstein et al. (2011) wrote that the originators of client-centred care and patient-centred health care were well aware of the moral implications of their work which is that: *"Health (maternity)*

*care should be based on a deep respect for patients (women) as unique living beings, and the obligation to care for them on their terms. Thus patients (women) are known as persons in context of their own social worlds, listened to, informed, respected, and involved in their care and their wishes are honoured (but not mindlessly enacted) during their health (maternity) care journey”.*¹⁹ Relating this to midwifery Hunter et al. (2017) stated: “*Woman-centred care can be facilitated through continuity of carer and in particular through midwife led models of care. Key elements of woman-centred care are protecting normality, education and decision making, continuity, empowerment for woman-centred care and building capacity for woman-centred care”.*²⁰

The component ‘individualized maternity care’ (care tailored to the person) came forward in chapter 5 where some women assessed the postpartum care by the maternity care assistant as too much care and other women assessed the care as not enough care. A recommendation in this chapter was that the number of hours of care by the maternity care assistant could be more individually tailored.

In chapter 6 and 7, the over-arching concept of individualized care emerged within almost all the themes including personal interaction with their midwife, and the content or organization of care. It would appear that women highly value this component of care, as they identify it as a necessary addition when it is absent and as an appreciated aspect when it is present.

This desire for individualized care also appears in studies internationally, as indicated, for example, in instances where women feel there is a lack of information and/or information is not being tailored to the individual, which was identified in research in Sweden, Australia and England.^{17, 21-22}

The component ‘extra time spent per person’ came forward in chapters 6 and 7. Women explicitly mentioned that they wanted their care provider to spend more time with them. This could relate to either the antenatal, intrapartum or postnatal care or to all three phases. When it comes to the intrapartum care the time a care provider spends per person is also related to the way support during childbirth is given and to the amount of support received from others. One way to spend more time with women could be by lowering the caseload. The caseload in the Netherlands is much higher compared to countries like Australia, Canada and Sweden.²³

The component of ‘continuity of care and care provider’ was discussed in chapters 2 through 7. In chapter 2, women who experienced an instrumental birth reported intrapartum care by their midwife as ‘less than good’ more often than women who experienced a spontaneous vaginal birth. And women who had an unplanned caesarean section were even more likely to indicate that they had received ‘less than good’ midwifery care during childbirth. We explained that women with an unplanned caesarean section or instrumental birth in this study will have had care transferred to other care providers during childbirth—most likely without their primary midwife staying on. It is possible that the discontinuity of care associated with the transfer from

the primary care midwife to the care providers in the secondary care system influenced the rating of midwifery care. In chapter 5, with regard to the received care, the odds of rating the postpartum care by the maternity care assistant as 'less than good' care were higher for women who received care from more different maternity care assistants (less continuity). In chapters 6 and 7 women indicated that they valued continuity of care and care provider. An earlier Dutch study showed that referral during labour was significantly associated with reporting a negative childbirth experience,²⁴ while another older study did not find a difference in satisfaction with the experience due to a referral during childbirth.²⁵ This can have several explanations. It may be due to a difference in research methods, or a difference in care provider continuity during a referral or it might also be that women's expectations for care during childbirth have changed over time.

Internationally there is scant consensus with respect to the importance of continuity of caregiver. While some studies described continuity of caregiver as important to and highly valued by women,²⁶⁻³⁰ others concluded that the focus on continuity of caregiver through pregnancy, childbirth and postpartum may be misguided.³¹⁻³³ The findings in this study indicating that women value more continuity of caregiver, is consistent with earlier research from the Netherlands.²⁷⁻²⁸

Previous studies have noted the importance and advantages of continuous support during childbirth.³⁴⁻³⁵ However, it is not clear who would be the best provider of continuous support in the context of the Dutch maternity care system. The most appropriate provider may also vary depending on the size, workload and work strategy of the midwifery practices (chapter 3). Chapter 3 states that maternity care assistants are willing to provide continuous support during childbirth, but at this moment do not feel competent to do so. In chapter 4, only 10% of the women indicated that they prefer continuous support specifically as defined by the Steering group. Therefore, we cannot conclude that all women in the Netherlands prefer to receive continuous support from 4 cm dilatation onwards during childbirth. The best approach might be to individualize continuous support and make it available for each woman on request such that each individual woman may decide in pregnancy and during labour what is best for her. Such an approach would be in keeping with individualized, woman-centred maternity care. In chapter 4 many women preferred to leave it to the midwife to decide whether to stay or not, rather than decide beforehand about being present at a certain time point during labour (at 4 cm or 7 cm dilation). This may be due to women's lack of knowledge about what might be best for them, or could result from trusting their midwife's ability to do what is right, similar to reports from international studies,³⁶⁻³⁷ or women may have a high level of self-efficacy. On the other hand it is also conceivable that women will not ask for options they do not consider possible in practice³⁶ and it might be difficult for women to indicate what they need during childbirth if they have not experienced childbirth before.³⁷ However, multiparous women also did not unequivocally express the desire to receive continuous support during childbirth. None of the participants in the present study indicated the need for support offered by a doula.

This could be because of a lack of knowledge about doula care, or women may have felt they had adequate access to support in the maternity care system in the Netherlands. International literature reports incongruent findings, i.e. the majority of women felt they did not receive enough support during childbirth.³⁸⁻⁴⁰ This discrepancy could be explained by unique features of the maternity care system and attitudes towards childbirth in the Netherlands.

One model of maternity care, which has its focus on women-centred care is the midwifery-led continuity model. The philosophy behind the midwifery-led continuity model is normality, continuity of care and being cared for by a known, trusted midwife during childbirth.⁴¹

While reorganizing the maternity care system the policy makers and stakeholders could consider intensifying the midwifery care model. The midwifery led continuity of care model is recommended by the WHO and has shown to offer equivalent levels of safety (compared to other models) with added benefit of giving women more choice resulting in more positive pregnancy, birth and postnatal experiences. This model also contains the concept of normality with fewer interventions for women and their babies.⁴¹⁻⁴³

In the newly launched WHO (2018) recommendations, “Intrapartum care for a positive childbirth experience”, the first four recommendations for care throughout labour and birth are: respectful maternity care, effective communication, companionship during labour and childbirth and continuity of care. The last recommendation adds: “Midwife-led continuity-of-care models, in which a known midwife or small group of known midwives supports a woman throughout the antenatal, intrapartum, and postnatal continuum, are recommended for pregnant women in settings with well-functioning midwifery programs”.⁴³

Ironically, the current developments in the Netherlands are not moving towards a more midwifery led continuity of care model but towards an integrated/shared care model and more protocol based care.⁴⁴ Such a direction reaffirms the need to carefully assess the remodelling of the current system to ensure that the women’s voices are adequately heard and heeded.

A major strength of this body of research is the triangulation of methods and respondents. In chapter 2, 5, 6 and 7 we used data from the Deliver study, the first large scale study to evaluate the quality and provision of primary midwifery care. In those chapters we were able to include large sample sizes, which for the most part are representative of the Dutch population of birthing women in the Netherlands. The open-ended questions in chapters 6 and 7, answered by a large group of women who started their care in primary care, contained a great amount of information on the experiences; opinions and suggestions of women about their midwives and the maternity care system in the Netherlands. It is likely that the sample favoured those who were motivated to answer the questions. Nevertheless, this large group of women gave a valuable insight into the perception and views of women about the maternity care (organization) they experienced.

A weakness of our study was the low percentage of women from non-Dutch ethnic backgrounds and women with a lower social economic status. The reason is that the main Deliver study had difficulty reaching those women. Although much effort was done by translating questionnaires in English, Turkish or Arabic and giving the opportunity to respond to the questionnaire via a telephone interview, the response from those groups was under-represented according to national population statistics. On the other hand, internationally women have indicated that they appreciate the same aspects of care, so it is likely that we can assume that the wishes of Dutch women also apply to non-Dutch women in the Netherlands.

In chapters 3 and 4 the questionnaire used was not validated. Still these studies resulted in information adding to the current knowledge about the views and opinions of women and maternity care assistants about maternity care in the Netherlands.

The Deliver study took place from 2009-2011 which means that the data are somewhat dated. However the discussion about the organization of the maternity care in the Netherlands is still ongoing and there is no reason to assume that the values of women are drastically different nowadays.¹

Implications for practice and policy

- Midwives should use strategies to enhance sense of control during birth and focus on the particular needs of those who go on to experience instrumental or unplanned caesarean birth. Strategies to enhance the sense of control are; informing women of options and choices available and involving them in decision making, letting women have an influence on birthing positions in labour, home birth and help women to deal with pain in a way feel that they are actually cared *about*, rather than care being something that is done to them. **(Chapter 2).**
- Midwives could provide more information about available types of support during childbirth, especially to nulliparous women. Our recommendation for the work field is to proactively discuss preferences for receiving support during childbirth with women and their partners. Furthermore, it is recommended to inform women and their partners about the positive effects support could have on their childbirth experience. This could be written down in a birth plan. Continuous support and informing about continuous support should perhaps be given more emphasis within the midwifery training program. **(Chapter 3)**
- We consider the best approach to continuous support that it should be available on request rather than not being available or being standard care. Then each woman can decide individually in pregnancy and during labour what is best for her. The challenge is providing continuous support by midwives because the caseload for midwives in the Netherlands is currently too high to provide continuous support for all women. A decrease of the caseload for midwives in the Netherlands might be considered. **(Chapter 3)**
- Additional schooling could be offered for maternity care assistants in order to be and feel competent to assist in childbirth. **(Chapter 4)**

- Maternity care assistant organizations should provide a clear description of the main tasks of the maternity care assistants and include a discussion about the expectations of the family at intake. This will assist the woman and her partner in realizing that one of the most important tasks of the maternity care assistants is to provide information and advice (and not to clean the house, for example) and this way the postpartum care by the maternity care assistant will even better fulfil the families' expectations. **(Chapter 5)**
- Provide women with honest information tailored to their personal needs, to increase the chance that their experience meets their expectations.
- In order to make improvements in the existing maternity care system, some suggestions require greater adjustments to implement than others. For instance, really listening to pregnant women and their partners and treating them well does not necessarily require additional financial commitments. This could be an important way to start improving quality and satisfaction. It would perhaps be more of a challenge to make more time available to spend with women who need it and provide women with individualized information. This should be possible to arrange in the current maternity care system, although this might have financial implications. More continuity of care provider throughout the prenatal, intrapartum, and postnatal period will require more effort and probably require a decrease in current caseload per midwife, which also has financial implications. **(Chapter 6 and 7)**

Implications for research

- Future research should consider how to address the unmet needs of women who undergo instrumental or unplanned caesarean birth, including for example, approaches to enhance a sense of control, such as extra attention and time, information, involvement in decision-making, continuity of primary care provider and debriefing the birth experience. **(Chapter 2)**
- In addition, the maternity care assistants revealed a strong need for extra training in childbirth assistance. These issues need to be resolved before continuous support provided by maternity care assistants can be effectively implemented. Also, studies need to be carried out to investigate the effects of continuous support by maternity care assistants on the quality of maternity care, maternal- and foetal condition, the number of referrals to the hospital, the childbirth experience and satisfaction with care. **(Chapter 3)**
- Because of the lack of knowledge about the perspective of the partners and midwives on their role with regard to providing continuous support during childbirth, we recommend future research to include an exploration of those perspectives. Moreover, we would like to reach non-Dutch and lower educated women to study their perspective on the supportive activities to be received during childbirth and also to compare and evaluate their needs for support before, during and after childbirth. **(Chapter 4)**

- Our recommendation for future research is to investigate the experience with postpartum maternity care by maternity care assistants among women who started their prenatal/natal care in secondary/ tertiary care. **(Chapter 5)**
- For research in the future we recommend additional in-depth interviews which enable further questioning and clarification of women's suggestions about midwifery care. We recommend research that includes women in both primary and secondary care in order to be more representative of women in the Netherlands. **(Chapter 6 and 7)**
- We suggest continuing research to carefully assess the remodelling of the current Dutch system to assure that the women's voice is adequately heard. **(Chapter 6 and 7)**
- In this thesis one important element of midwifery led care and women centred care was not addressed; the concept of normality. Because in the Netherlands pregnancy and childbirth are generally regarded as normal life events, this concept has not really been part of the debate in the Netherlands and therefore not extensively studied. The concept of normality and the increased number of interventions used during birth worldwide is highlighted in the lancet series (beyond too little, too late and too much too soon: a pathway towards evidence based, respectful maternity care) and in the new WHO recommendations.^{43,45} In the light of the current changes in the Dutch maternity care system, this could be an interesting topic for research in the Netherlands in the future.

Conclusion

The vast majority of women were satisfied with the antenatal, intrapartum and postpartum care they received from midwives and maternity care assistants. Noteworthy is Dutch women's positive evaluation of the postpartum care provided by maternity care assistants. In particular because internationally postpartum care is generally given a lower rating than other episodes of maternity care.

Women in the Netherlands would benefit from an improvement of care focusing on: woman (person)-centeredness and woman (person)-centred communication; individualized maternity care; extra time spent per person; continuity of care and maternity care provider; and experienced control.

We conclude that a woman-centred approach should include: a friendly, kind, involved approach, client-centred communication, really listening, personal attention, being taken seriously and reassuring, more information and information tailored to the person, accessibility and approachability, continuity of care and care provider and with enough time spent with the woman.

We consider the best approach to continuous support is that it should be made available on request by the labouring woman. Women favour their midwife (and partner) for this kind of support. Additional training could be offered for maternity care assistants in order to be and feel competent to assist in childbirth (although not to provide continuous support).

In order to achieve the improvements of care as described above, the current maternity care model could be reconsidered and the midwifery caseload might have to be adjusted downwards.

Women centeredness and women's perspectives should play a central role in defining the current development of maternity care in the Netherlands. As policy changes are made to incorporate integrated care, efforts must be made to ensure that care continues to be individualized in keeping with the wishes of Dutch women. Discussions and research around organization of care are still ongoing and women should be prominently involved and their suggestions and perceptions should be heard.

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CHAPTER 9

Summary



This thesis contributes to our knowledge of the organization and women's views of maternity care in the Netherlands.

Chapter 1 provides a general introduction to the thesis, which focuses on the organization and women's views of maternity care in the Netherlands, explores women's suggestions for improving and preserving (primary) midwifery care in the Netherlands and identifies factors associated with less positive experiences of maternity care during childbirth and the postnatal period.

Both positive and negative experiences of pregnancy and childbirth can have immediate and long-lasting effects on a woman's well-being and her relationship with her child. The involvement of patients and clients as active participants in health care instead of passive care recipients has increased over the past few decades, and is visible in the growing literature about informed and shared decision making and patient engagement. In recent years, in the Netherlands, there has been a lot of discussion among professionals and in the public media concerning reports that reductions in perinatal mortality were lagging, compared to other European states. A commonly aired suggestion was that the unique Dutch maternity care system with independent primary care midwives might contribute to higher than expected perinatal mortality – a suggestion that has not been substantiated. A major focus of attention in discussions among the professional groups, and in national media outlets, has been on the need for a more integrated healthcare system with fewer barriers between echelons of care.

This thesis contains the reports of studies which are built on the DELIVER study (DELIVER stands for Data Eerste Lijns VERlofskande , data on primary midwifery care), which is a large prospective cohort study in the Netherlands set up to investigate the organization, accessibility and quality of primary midwifery care. Data were collected between 2009 and 2011.

In more detail, the aims of this thesis are:

1. To understand the relation between client related factors and the experience of intrapartum midwifery care in order to give midwives insight into how they might improve the care they provide during childbirth.
2. To explore the opinion of maternity care assistants about providing continuous support during childbirth and performing additional medical tasks.
3. To explore women's perspective on support during and after childbirth including who provided the support, and the type and timing of supportive activities.
4. To develop an understanding of the uptake of maternity care assistance during the postpartum period in the Netherlands and examine which factors affected the women's rating of postpartum maternity care by maternity care assistants.
5. To explore women's ideas and suggestions about maternity care within the current maternity care model.
6. To explore what women have valued in the care they received and what they think their midwives should continue doing.

Chapter 2 describes client related factors associated with a 'less than good' experience of midwifery care during childbirth in the Netherlands.

This study was part of the 'DELIVER study' where mothers report on the care they received. We used Generalized Estimating Equations (GEE) to control for correlations within midwife practices. Forward multivariate logistic regression analyses were conducted to model the client related factors associated with the experienced midwifery care during childbirth.

We included the responses of 2377 women. In the multivariable logistic regression model, odds of reporting 'less than good care' were significantly higher for women who experienced an unplanned caesarean birth (OR 2.21 CI 1.19-4.09), an instrumental birth (OR 1.55, CI 1.08-2.23), less control during the dilation phase (OR 0.98, CI 0.97-0.99) and pushing phase (OR 0.98, CI 0.97-0.99).

We found that birth related factors were more likely than maternal characteristics to be associated with the experience of midwifery care during childbirth. We concluded that there is room for midwives to improve their care for women during childbirth particularly in improving the patient centeredness of the care provider, using strategies to enhance sense of control and focussing on the particular needs of those who experience instrumental vaginal or unplanned caesarean births.

Chapter 3 explores the opinions of maternity care assistants (MCAs) about continuous support during childbirth by MCAs. To explore the opinions of MCAs, four semi-structured group discussions took place and 190 questionnaires were sent out to MCAs nationally. We found that, in both the group discussions and questionnaires, MCAs displayed positive attitudes towards providing continuous support during childbirth. Generally MCAs were not keen on adding medical tasks. The importance of a clear distribution of responsibilities between midwives and MCAs was reported. The majority of MCAs, 60%, thought midwives would appreciate MCAs providing continuous support, although 40.5% disagreed with dividing the profession into child birth care and postpartum care teams. Two thirds mentioned the need for extra training in childbirth assistance. We concluded that, in general, MCAs were positive about providing continuous support during childbirth. The majority of MCAs think that it is unwise to give MCAs additional medical responsibilities. The opinions differ concerning issues of practical organization. MCAs generally thought extra schooling was important to be and feel competent to assist during childbirth.

Chapter 4 aims to quantify women's preferences and preparations for support during labour and the first hours after childbirth and to quantify the specific preference for continuous support. Also the association with parity and the intended place of birth is studied. We used a cross-sectional survey. Twelve midwifery practices in the northern Netherlands recruited pregnant women. Measurements of the structured questionnaire were preparation for childbirth and

preference for support (timing, including continuous support, provider and type of support). Of the 247 eligible women 205 women participated.

We found that nulliparae, significantly more often than multiparae, aimed to prepare themselves by attending prenatal classes (63% versus 21%) and by writing a birth plan (59% versus 40%). Women preferred to receive various types of support during childbirth from their partner (100%), midwife (95%), maternity care assistant (29%) and nurse (15%). The women preferred the midwife to be present from the moment the midwife (48%) or the woman herself (22%) indicates. 10% of the women preferred continuous support from 4 cm dilatation onwards.

We considered the best approach to continuous support that it should be available on request rather than being not available or being the standard care.

Chapter 5 concerns the experiences with and amount of postpartum maternity care: Comparing women who rated the care they received from the maternity care assistant as ‘good’ or ‘less than good care’. Our research questions are; among postpartum women in the Netherlands, what is the uptake of MCA care and what factors are significantly associated with women’s rating of care provided by the MCA.

We used data from the ‘DELIVER study’, a dynamic cohort study, which was set up to investigate the organization, accessibility and quality of primary midwifery care in the Netherlands. In the DELIVER population 95.6% of the women indicated that they had received postpartum maternity care by an MCA in their home. We included the responses of 3170 women. To assess the factors that were significantly associated with reporting ‘less than good (postpartum) care’ by the MCA, a full cases backward logistic regression model was built using the multilevel approach in Generalized Linear Mixed Models.

We found that the mean rating of the postpartum care by the MCA was 8.8 (on a scale from 1-10), and 444 women (14%) rated the postpartum maternity care by the MCA as ‘less than good care’. In the full cases multivariable analysis model odds of reporting ‘less than good care’ by the MCA were significantly higher for women who were younger (women 25–35 years had an OR 1.32, CI 0.96–1.81 and women < 25 years had an OR 1.90, CI 1.14–3.16) compared to women who were > 35 years, multiparous (OR 1.27, CI 1.01–1.60) and had a higher level of education (women with a middle level had an OR 1.84, CI 1.22–2.79 and women with a high level of education had an OR 2.11, CI 1.40–3.18) compared to women with a low level of education. With regards to the care, odds of reporting ‘less than good care’ were higher for women who received the minimal amount of hours (OR 1.86, CI 1.45–2.38), in their opinion received not enough or too much hours maternity care assistance (OR 1.47, CI 1.01–2.15 and OR 5.15, CI 3.25–8.15 respectively), received care from more different MCAs (2 MCAs OR 1.61, CI 1.24–2.08), ≥3 MCAs OR 3.01, CI 1.98–4.56 compared to 1 MCA) and rated the care of the midwife as less than good care (OR 4.03, CI 3.10–5.25). The odds were lower for women whose reason for choosing maternity care assistance was to get information and advice (OR 0.52, CI 0.41–0.65).

We concluded that (the postpartum) MCA care is well utilized, and highly rated by most women. We implicated that the approach to care in the Netherlands addresses the needs as outlined by NICE and WHO. Although no data exist around the impact of use on maternal infant outcomes, this approach might be useful in other jurisdictions. MCA care might be improved if the hours of MCA care were tailored, and care by multiple MCAs minimized.

Chapter 6 and chapter 7 examined women's suggestions for improving the midwifery care in the Netherlands and their comments about what aspects of midwifery care they value in the maternity care system in the Netherlands. These qualitative studies were part of the "DELIVER" study. Clients were recruited from 20 midwifery practices. Purposive sampling was used to select the practices. The clients received up to three questionnaires, in which they could respond to the question; "Do you have any suggestions on how your midwife could improve his/her provision of care?" and "What should your midwife definitely keep doing?" The answers were analysed with a qualitative thematic content analysis, using the software program MAXQDA. We were able to derive codes, themes, main themes and an overarching concept.

In **chapter 6** 3499 answers were analysed and one overarching concept emerged: clients' desire for individualized care. Within this concept, suggestions could be clustered around 1) provider characteristics: interpersonal skills, communication, and competence, and 2) service characteristics: content and quantity of care, guidance and support, continuity of care provider, continuity of care, information, and coordination of care.

In **chapter 7**, 11437 answers, given by 6715 women, were analysed. We found that the findings from this study strengthened the thematic map developed in our earlier research that examined women's recommendations for changes to their midwifery care.

Many of the items that women value (chapter 7) were very similar to items that women identified as missing in their care (chapter 6). The finding that the results from both studies are corresponding, confirms that women have a clear ideas about what they want in their care.

We discussed that all themes derived were direct and indirect elements of person(women)-centred care. We conclude that women and their families should be served by a women-centred approach which includes; a friendly and kind attitude, client-centred communication, really listening, personal attention, taken seriously and reassuring, more information and information tailored to the person, accessibility and approachability, continuity of care and care provider and with enough time spent with the woman. These elements of value which women mentioned in our study are also shown to be important to women internationally.

We concluded that women centeredness and women's perspectives should play a crucial role in defining the current development of maternity care in the Netherlands. As policy changes are made to incorporate integrated care, efforts must be made to ensure that care continues to be individualized in keeping with the wishes of Dutch women. Discussions and

research around the organization of care are still ongoing and women should be involved more prominently as well as their suggestions and perceptions.

Chapter 8 General discussion

The vast majority of women were satisfied with the antenatal, intrapartum and postpartum care they received from midwives and maternity care assistants. Women's good assessments of the postpartum care by maternity care assistants is noteworthy in particular because internationally postpartum care is generally given a lower rating than other periods of maternity care.

Women in the Netherlands would benefit from an improvement of care focusing on: woman (person)-centeredness and woman (person)-centred communication; individualized maternity care; extra time spent per person; continuity of care and maternity care provider; and experienced control.

We conclude that a woman-centred approach should include: a friendly, kind, involved approach, client-centred communication, really listening, personal attention, being taken seriously and reassuring, more information and information tailored to the person, accessibility and approachability, continuity of care and care provider and with enough time spent with the woman.

We consider the best approach to continuous support is that it should be made available on request by the labouring woman. Women favour their midwife (and partner) for support. Additional training could be offered for maternity care assistants in order to be and feel competent to assist in childbirth (although not to provide continuous support).

In order to achieve the improvements of care as described above the current maternity care model could be reconsidered and the midwifery caseload might have to be adjusted downwards.

Women centeredness and women's perspectives should play a crucial role in defining the current development of maternity care in the Netherlands. As policy changes are made to incorporate integrated care, efforts must be made to ensure that care continues to be individualized in keeping with the wishes of Dutch women. Discussions and research around organization of care are still ongoing and women should be prominently involved and their suggestions and perceptions should be heard.

HOOFDSTUK 10

Nederlandse samenvatting



Deze thesis draagt bij aan de kennis over de organisatie van de verloskundige zorg en het perspectief van vrouwen met betrekking tot de verloskundige zorg in Nederland.

Hoofdstuk 1 betreft een algemene inleiding van het proefschrift, dat zich focust op de organisatie en het perspectief van vrouwen met betrekking tot de verloskundige zorg in Nederland. In dit proefschrift is onderzocht wat verbeterd en behouden dient te worden aan de (eerstelijns) verloskundige zorg in Nederland. Verder zijn factoren geïdentificeerd die samenhangen met het minder positief ervaren van de verloskundige zorg tijdens de bevalling en in de postnatale periode.

Positieve en negatieve ervaringen met zwangerschap en bevalling kunnen invloed hebben op het welzijn van de vrouw en haar relatie met haar kind op de korte en lange termijn.

De betrokkenheid van patiënten en cliënten als actieve deelnemers in de gezondheidszorg, in plaats van passieve zorgontvangers, is de afgelopen decennia toegenomen. Dit is zichtbaar in de groeiende literatuur over 'geïnformeerde en gezamenlijke besluitvorming (informed and shared decision making) en over patiëntbetrokkenheid. In de afgelopen jaren is er in Nederland veel discussie geweest onder professionals en in de media over het bericht dat reducties in perinatale sterfte in Nederland zijn achterbleven in vergelijking met andere Europese landen. Een veelgehoorde suggestie was dat het unieke verloskundig systeem in Nederland, met onafhankelijke eerstelijns verloskundigen, zou kunnen hebben bijgedragen aan deze hoger dan verwachte perinatale sterfte. Een suggestie die niet kon worden aangetoond en onderbouwd. Een belangrijk aandachtspunt in de discussies tussen de professionals en in de nationale media was het belang van een meer geïntegreerd gezondheidszorgsysteem met minder barrières tussen de verschillende echelons.

Dit proefschrift bevat onderzoeken die voortbouwen op de DELIVER-studie (DELIVER staat voor Data Eerste Lijns VERloskunde, data over eerstelijns verloskundige zorg), een grote prospectieve cohortstudie in Nederland die is opgezet om de organisatie, toegankelijkheid en kwaliteit van de eerstelijns verloskundige zorg te onderzoeken. Gegevens werden verzameld tussen 2009 en 2011.

De meer specifieke doelstellingen van dit proefschrift zijn:

1. Het begrijpen van de relatie tussen cliënt-gerelateerde factoren en het ervaren van verloskundige zorg tijdens de bevalling om zo verloskundigen inzicht te geven in hoe zij de zorg die zij bieden tijdens de bevalling kunnen verbeteren.
2. Het exploreren van de mening van kraamverzorgenden met betrekking tot het bieden van continue ondersteuning tijdens de bevalling en het uitvoeren van aanvullende medische taken.
3. Het exploreren van het perspectief van vrouwen met betrekking tot ondersteuning tijdens en na de bevalling, inclusief wie de ondersteuning verzorgt, het type ondersteuning en tijdstip van de ondersteuning.

4. Inzicht krijgen in de afname van kraamzorg in Nederland en onderzoeken welke factoren de beoordeling van vrouwen van de postnatale kraamzorg beïnvloeden.
5. Het exploreren van ideeën en suggesties van vrouwen over de verloskundige zorg binnen het huidige verloskundig systeem.
6. Het exploreren wat vrouwen waarderen in de zorg die zij hebben ontvangen en wat zij denken dat hun verloskundigen vooral moeten blijven doen.

Hoofdstuk 2 beschrijft cliënt gerelateerde factoren die samenhangen met een ‘minder dan goede’ ervaring met de intrapartum zorg in Nederland.

Deze studie was onderdeel van de ‘DELIVER-studie’, waarbij moeders rapporteren over de zorg die zij hebben ontvangen. De antwoorden van 2377 vrouwen werden geïncludeerd.

We gebruikten Generalized Estimating Equations (GEE) om te controleren voor correlaties in de verloskundige praktijken. Om de cliënt gerelateerde factoren die geassocieerd zijn met de ervaring van de intrapartum zorg te modelleren werd een forward multivariate logistische regressieanalyse uitgevoerd.

In het multivariabele logistische regressiemodel waren de kansen om ‘minder dan goede zorg’ (≤ 7) te rapporteren significant hoger voor vrouwen met een secundaire sectio caesarea (OR 2.21 CI 1.19-4.09), met een kunstverlossing (OR 1.55, CI 1.08-2.23) en wanneer vrouwen minder controle ervoeren tijdens ontsluitingsfase (OR 0.98, CI 0.97-0.99) en tijdens de persfase (OR 0.98, CI 0.97-0.99).

De ervaring van de intrapartum zorg hangt meer samen met bevalling-gerelateerde factoren dan met maternale kenmerken. We concludeerden dat er ruimte is voor verloskundigen om de intrapartum zorg te verbeteren en dan met name door een verbetering van de cliëntgerichtheid. Verder dient men zich te richten op strategieën die het gevoel van controle vergroten en op de specifieke behoeften van degenen die een kunstverlossing of een secundaire sectio caesaria ondergaan.

Hoofdstuk 3 exploreert meningen van kraamverzorgenden over continue ondersteuning tijdens de bevalling door kraamverzorgenden. Om de meningen van kraamverzorgenden te onderzoeken, vonden vier semigestructureerde groepsdiscussies plaats en werden 190 vragenlijsten nationaal verstuurd.

We ontdekten dat kraamverzorgenden zowel in de groepsdiscussies als in de vragenlijsten een positieve houding hadden ten opzichte van continue ondersteuning tijdens de bevalling. Over het algemeen hadden kraamverzorgenden geen behoefte aan het toevoegen van medische taken aan hun takenpakket. Het belang van een duidelijke verdeling van verantwoordelijkheden tussen verloskundigen en kraamverzorgenden kwam naar voren. De meerderheid van de kraamverzorgenden, 60%, dacht dat verloskundigen het zouden waarderen als kraamverzorgenden continue ondersteuning zouden geven. Toch was 40,5% van de kraamverzorgenden het niet eens met een mogelijke consequentie daarvan, namelijk het verdelen van de beroepsgroep

in twee teams: een partusteam en een postpartumteam. Twee derde noemde de behoefte aan extra scholing met betrekking tot partusassistentie.

We concludeerden dat kraamverzorgenden over het algemeen positief waren over het bieden van continue ondersteuning tijdens de bevalling. De meerderheid van de kraamverzorgenden vindt het niet wenselijk om hun medische verantwoordelijkheden uit te breiden. De meningen lopen uiteen wat betreft praktische organisatie. Kraamverzorgenden vonden over het algemeen dat extra scholing belangrijk was om bekwaam te zijn en en zich bekwaam voelen in partusassistentie.

Hoofdstuk 4 beschrijft en kwantificeert de voorkeuren en de voorbereidingen van vrouwen voor de ondersteuning tijdens de bevalling en de eerste uren postpartum. Ook de mate waarin dit varieert voor pariteit en beoogde plaats van bevalling is daarin onderzocht. Twaalf verloskundige praktijken in Noord-Nederland hebben zwangere vrouwen benaderd om te participeren in dit onderzoek. Door middel van een gestructureerde vragenlijst werden de voorbereiding op de bevalling en de voorkeur met betrekking tot de ondersteuning bevraagd (timing, inclusief continue ondersteuning, type en persoon die de ondersteuning verzorgt). Van de 247 vrouwen die in aanmerking kwamen namen 205 vrouwen deel aan het onderzoek.

We vonden dat nulliparae, significant vaker dan multiparae, zichzelf voorbereidden door deel te nemen aan een zwangerschapscursus (63% versus 21%) en door een geboorteplan op te stellen (59% versus 40%). Vrouwen gaven tijdens de bevalling voorkeur aan ondersteuning van hun partner (100%), verloskundige (95%), kraamverzorgende (29%) en verpleegkundige (15%). De vrouwen gaven er de voorkeur aan dat de verloskundige aanwezig is vanaf het moment dat de verloskundige (48%) dit aangeeft of de vrouw zelf dit aangeeft (22%). 10% van de vrouwen gaf aan een voorkeur te hebben voor continue ondersteuning vanaf 4 cm ontsluiting.

Wij concluderen dat continue ondersteuning tijdens de bevalling op verzoek zou moeten worden aangeboden in plaats van dat het niet mogelijk is of standaard geboden wordt.

Hoofdstuk 5 beschrijft het gebruik van postpartum kraamzorg en de ervaringen met kraamzorg. We vergeleken vrouwen die de zorg die zij van de kraamverzorgende hebben ontvangen als 'goed' beoordeelden met vrouwen die de zorg beoordelen als 'minder dan goede zorg'. De onderzoeksvragen waren: Wat is het gebruik van kraamzorg postpartum onder vrouwen in Nederland en welke factoren zijn significant geassocieerd met de beoordeling van deze kraamzorg. Er werd gebruik gemaakt van gegevens uit de 'DELIVER-studie'. Van de vrouwen in de DELIVER populatie gaf 95,6% aan kraamzorg te hebben ontvangen. De antwoorden van 3170 vrouwen werden geïnccludeerd. Om de factoren te beoordelen die significant samenhangen met het rapporteren van 'minder dan goede (postpartum) zorg' door de kraamverzorgende, werd een 'full cases' backward logistisch regressie model opgesteld door middel van een multilevelbenadering in Generalized Linear Mixed Models

De gemiddelde beoordeling van de postpartumzorg door de kraamverzorgende betrof een 8,8 (op een schaal van 1-10), en 444 vrouwen (14%) beoordeelden de postpartum kraamzorg als ‘minder dan goede kraamzorg’ (≤ 7 op een schaal van 1-10). In het full cases multivariabele analysemodel waren de kansen voor het rapporteren van ‘minder dan goede kraamzorg’ significant hoger voor vrouwen die jonger waren (vergeleken met vrouwen van >35 jaar hadden vrouwen van 25-35 jaar een OR 1.32, CI 0.96-1.81 en vrouwen <25 OR 1.90, CI 1.14-3.16), multipara waren (primiparae hadden een OR 1.27, CI 1.01-1.60) en hoger opgeleid waren (vergeleken met vrouwen met een laag opleidingsniveau hadden vrouwen met gemiddeld opleidingsniveau een OR 1.84, CI 1.22-2.79 en vrouwen met een hoge opleiding hadden een OR 2.11, CI 1.40- 3.18).

Verder was de kans groter dat de kraamzorg als ‘minder dan goede zorg’ werd ervaren voor vrouwen die het minimale aantal uren kraamzorg ontvingen (OR 1.86, CI 1.45- 2.38), en vrouwen die naar hun mening te weinig of te veel uren kraamzorg hulp hebben ontvangen (OR 1.47, CI 1.01-2.15 en OR 5.15, CI 3.25-8.15 respectievelijk), kraamzorg hebben ontvangen van meerdere kraamverzorgenden (2 kraamverzorgenden OR 1.61, CI 1.24-2.08, ≥ 3 kraamverzorgenden OR 3.01, CI 1.98-4.56 vergeleken met 1 MCA) en als vrouwen de zorg van de verloskundige ook als ‘minder dan goede zorg’ hadden beoordeeld. (OR 4.03, CI 3.10-5.25). De kansen waren lager voor vrouwen die aangaven dat hun motivatie voor het aanvragen van kraamzorg het ontvangen van informatie en advies was (OR 0.52, CI 0.41-0.65).

Concluderend is het gebruik van de postpartum kraamzorg hoog en wordt kraamzorg door de meeste vrouwen hoog gewaardeerd. De inrichting van de postpartum zorg in Nederland voldoet aan de behoeften zoals geschetst door ‘the National Institute for Health and Care Excellence’ (NICE) en ‘the World Health Organisation’ (WHO). Hoewel er (nog) geen gegevens beschikbaar zijn over de invloed van het gebruik van postpartumkraamzorg op de gezondheidssuitkomsten van de neonat, kan deze aanpak nuttig zijn in andere landen en zorgsystemen. Postpartum kraamzorg kan worden verbeterd als de uren kraamzorg beter worden afgestemd op de wensen en de situatie in het gezin en het aantal verschillende kraamverzorgenden per gezin tot een minimum wordt beperkt.

Hoofdstuk 6 en hoofdstuk 7 betreffen suggesties van vrouwen ter verbetering van de verloskundige zorg en hun opmerkingen over welke aspecten van verloskundige zorg zij waarderen in Nederland. Deze kwalitatieve studies maakten deel uit van de ‘DELIVER-studie’. Door middel van ‘purposive sampling’ werden 20 verloskundige praktijken in Nederland geselecteerd. Cliënten van deze 20 verloskundige praktijken werden benaderd. De vrouwen ontvingen maximaal drie vragenlijsten, waarin ze konden reageren op de vraag; “Heeft u suggesties over hoe uw verloskundige zijn / haar zorgverlening zou kunnen verbeteren?” En “Wat moet uw verloskundige absoluut blijven doen?” De antwoorden werden geanalyseerd met een kwalitatieve thematische content analyse, met behulp van het softwareprogramma

MAXQDA. Er werden codes, thema's, hoofdthema's en een overkoepelend concept gecreëerd. In hoofdstuk 6 werden 3499 antwoorden geanalyseerd. Er kwam één overkoepelend concept naar voren: de behoefte van vrouwen aan geïndividualiseerde zorg. Binnen dit concept konden de suggesties worden gegroepeerd rond 1) zorgverlenerskenmerken: interpersoonlijke vaardigheden, communicatie en deskundigheid, en 2) servicekarakteristieken: inhoud en kwantiteit van zorg, begeleiding en ondersteuning, continuïteit van zorgverlener, continuïteit van zorg, informatie en coördinatie van zorg.

In hoofdstuk 7 in werden 11437 antwoorden, gegeven door 6715 vrouwen, geanalyseerd. We ontdekten dat de bevindingen van dit onderzoek de thematische kaart uit eerder onderzoek versterkten.

Veel van de items die vrouwen waarderen (hoofdstuk 7) kwamen sterk overeen met items die vrouwen identificeerden als tekortkoming in hun zorg (hoofdstuk 6). De bevinding dat de resultaten van beide studies overeenstemmen, bevestigt dat vrouwen een duidelijk beeld hebben wat zij van de verloskundige zorg wensen.

Bediscussieerd werd dat alle afgeleide thema's directe en indirecte elementen waren van persoonsgerichte zorg. We concluderen dat vrouwen en hun gezinnen gebaat zijn bij een vrouwgerichte aanpak, waaronder: een vriendelijke houding, klantgerichte communicatie, echt luisteren, persoonlijke aandacht, serieus genomen worden en gerustgesteld worden, meer informatie en informatie op maat, toegankelijkheid en benaderbaarheid, continuïteit van zorg en zorgverlener en met voldoende tijd per persoon. Deze waardevolle elementen die vrouwen in onze studie naar voren brachten, blijken ook internationaal belangrijk te zijn voor vrouwen.

We concludeerden dat vrouwgerichtheid en vrouwenperspectieven een cruciale rol moeten spelen bij het bepalen van de huidige ontwikkeling van verloskundige zorg in Nederland. Aangezien beleidswijzigingen inmiddels worden doorgevoerd om te komen tot een vorm van integrale geboortezorg, dienen we ons in te spannen voor geïndividualiseerde zorg in overeenstemming met de wensen van Nederlandse vrouwen. De discussie en het onderzoek rondom de organisatie van de verloskundige zorg zijn nog steeds gaande en vrouwen moeten prominent worden betrokken en hun suggesties en percepties dienen te worden gehoord.

Hoofdstuk 8 Algemene discussie

De overgrote meerderheid van de vrouwen in het onderzoek was tevreden met de prenatale, intra-partum en postpartum zorg die zij ontvingen van verloskundigen en kraamverzorgenden. Een goede beoordeling door vrouwen van de postpartumzorg door kraamverzorgenden is met name opmerkelijk omdat internationale postpartumzorg over het algemeen een lagere waardering krijgt dan de prenatale en intrapartum zorg.

Vrouwen in Nederland zouden baat hebben bij een verbetering van de zorg gericht op: op de vrouw (persoon) gerichte zorg en op de vrouw (persoon) gerichte communicatie; geïndividualiseerde verloskundige zorg; extra tijd per persoon; continuïteit van zorg en zorgverlener; en versterking van het gevoel van controle.

We concluderen dat een vrouwgerichte benadering zou moeten bestaan uit: een vriendelijke, betrokken aanpak, persoon gerichte communicatie, echt luisteren, persoonlijke aandacht, vrouwen serieus nemen en geruststellen, meer informatie en geïndividualiseerde informatie, toegankelijkheid en benaderbaarheid, continuïteit van zorg en zorgverlener en voldoende tijd doorgebracht met de vrouw.

Continue ondersteuning bij de bevalling zou op verzoek van de barende beschikbaar moeten zijn. Vrouwen geven de voorkeur aan hun verloskundige (en partner) voor ondersteuning. Aanvullende training zou kunnen worden aangeboden voor kraamverzorgenden om competent te zijn en zich competent te voelen bij assistentie bij de bevalling (niet direct om zelfstandig continue begeleiding te bieden).

Om de verbeteringen van de zorg zoals hierboven beschreven te bereiken, kan het huidige verloskundige zorgmodel worden heroverwogen en dient het aantal zorggevallen van de verloskundige naar beneden te worden bijgesteld.

Vrouwgerichtheid en vrouwenperspectieven dienen een cruciale rol te spelen bij het bepalen van de huidige ontwikkelingen van de verloskundige zorg in Nederland. Aangezien beleidswijzigingen inmiddels worden doorgevoerd om de zorg te integreren, dienen we ons in te spannen voor geïndividualiseerde zorg in overeenstemming met de wensen van Nederlandse vrouwen. De discussie en het onderzoek rondom de organisatie van de verloskundige zorg zijn nog steeds gaande en vrouwen moeten prominent worden betrokken en hun suggesties en percepties dienen te worden gehoord.

CURRICULUM VITAE

Carien Irene Baas was born on March 20th 1982 in Groningen, The Netherlands. She grew up in Haren, a village just below the city of Groningen. In 2000 she received her pre-university secondary education degree (VWO) at the Maartenscollege, Haren. After one year of visiting Spain and working she started studying Health Sciences (gezondheidswetenschappen) at the Faculty of Health, Medicine and Life Sciences in Maastricht. That year she completed her foundation course (propedeuse). In 2002 she moved back to Groningen where she started the Midwifery education program at the Midwifery Academy of Amsterdam and Groningen (AVAG). In 2006 she graduated and received the thesis prize (with three fellow students) for their thesis on 'urinary incontinence during pregnancy and postpartum'. After her graduation she started working as a primary care midwife at the Verloskundige Stadspraktijk in Groningen. In 2007 she started the Midwifery master of science at the AMC in Amsterdam. She received her Master Degree in 2010, writing a thesis on continuous support during childbirth by maternity care assistants. In 2011 she started her part-time PhD project supported by the verloskundige Stadspraktijk and the AVAG. For four years she worked part-time as a PhD student, midwife and teacher. In 2015 she received a PhD-funding of the Royal Organisation of Midwives (KNOV), which ended in 2016. In 2016 she started working fulltime as a teacher at the AVAG.

Carien is married to Joost van de Werf . In 2009 their son Bram was born and during Carien's PhD project their daughter Suze (2011) and their youngest son Sjors (2015) were born.

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MIDWIFERY SCIENCE PUBLICATIONS

The studies presented in this thesis were conducted within Amsterdam UMC, VU University Medical Centre, the Department of Midwifery Science, Public Health Research Institute, Amsterdam, the Netherlands and the Department of General Practice & Elderly Medicine, University Medical Centre Groningen, University of Groningen, the Netherlands and AVAG Midwifery Academy Amsterdam Groningen, the Netherlands in collaboration with NIVEL (Netherlands Institute for health services research), Utrecht

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More recent theses of Midwifery Science and/or using DELIVER data can be found in the list below.

2018

Baas CI

Women's voices: towards understanding the organization and women's views of maternity care in the Netherlands

[VU Amsterdam]

(prof EK Hutton, prof JJHM Erwich, dr TA Wiegers, dr TP de Cock)

2017

Perdok H

Challenges of integrating maternity care

[VU Amsterdam]

(prof FG Schellevis, dr A de Jonge, dr J van Dillen, dr CJ Verhoeven)

Baron R

Maternal health and prenatal health education in midwife-led primary care

[VU Amsterdam]

(prof J Brug, prof EK Hutton, dr J Manniën, dr SJ te Velde)

Warmelink JC

The organisation of midwifery care

[VU Amsterdam]

(prof EK Hutton, dr TA Wiegers, dr TP de Cock)

2015

Feijen-de Jong EI

On the use and determinants of prenatal healthcare services

[University of Groningen]

(prof SA Reijneveld, prof FG Schellevis, dr DEMC Jansen, dr F Baarveld)

Martin L

Counseling for prenatal anomaly screening.

Parents' perspectives, midwives' perspectives, and client-midwife communication

[VU Amsterdam]

(prof EK Hutton, prof AM van Dulmen, dr ER Spelten)

Gitsels-van der Wal JT

Religious beliefs in decision-making and counseling around prenatal anomaly screening

Views of pregnant Muslim Turkish and Moroccan woman and midwives

[VU Amsterdam]

(prof JS Reinders, prof EK Hutton, dr J Mannien, dr PS Verhoeven)

Klomp GMT

Management of labour pain in midwifery care

[Radboud University Nijmegen]

(prof ALM Lagro-Janssen, prof EK Hutton, dr A de Jonge)

Boerleider AW

Non-western women in maternity care in the Netherlands: exploring 'inadequate' use of prenatal care and the experiences of care professionals

[University of Amsterdam]

(prof WLJM Deville, prof AL Francke, dr TA Wiegers, dr J Manniën)

2014

Pereboom MTR

The role of clients, midwives and health policy in preventing infectious diseases in pregnancy

Toxoplasmosis, Listriosis, Cytomegalovirus & Chlamydia trachomatis

[VU Amsterdam]

(prof EK Hutton, prof FG Schellevis, dr ER Spelten, dr J Manniën)